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MAN IN SIMULANT TESTING OF THE MARK IV AND KAPPLER CPF3 PROTECTIVE SUITS

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PREFACE

The work described in this report was funded by the Chemical Stockpile Emergency Preparedness Program (CSEPP) and was started in March 1998 and completed in June 1998.

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Man In Simulant Testing of the Mark IV and Kappler CPF3 Protective Suits

1. INTRODUCTION

Man In Simulant Testing (MIST) was performed to determine the protective capability of the British Mark IV and the Kappler CPF3 suits. This program was funded by the U. S. Army Chemical Stockpile Emergency Preparedness Program (CSEPP).

Extensive modelling has been performed to determine an appropriate method for the evaluation of protection based upon a Body Region Hazard Analysis (BRHA). This method uses actual skin adsorption data from agents and simulants to predict the Minimum Required Exposure Dosage (MRED) an individual must be exposed to in order to produce end-point reactions in the body for systemic (nerve agent) and localized (mustard) exposure to agents.

Tests were performed at the Edgewood Research, Development and Engineering Center (ERDEC)*. Similar testing has been conducted on various other protective suit ensembles from 1995¹ to the present. A total of five trials, each involving four test participants was conducted on the Mark IV from March to June 1998 and six trials with four test participants on the Kappler CPF3 from May to June 1998.

1.1 Description of the British Mark IV Overgarment

The British Mark IV, referred to as the Suit Protective, NBC No.1 MKIV, DPM, Smock and Trousers, is approved by the British military for operations on a contaminated battlefield. It is constructed of an outer cloth material, and an inner charcoal cloth liner. The smock (jacket) has an integral hood with an elastic band that seals around the mask and is sealed by a zipper covered with a cloth hook and pile strip. The wrists and waist are sealed with hook and pile tightening straps. The trousers have suspenders and hook and pile tightening straps at the ankles (two sets) and at the waist at the front belt position. Standard butyl gloves and the U.S. Army's Green Vinyl Over Boots (GVOs) were worn with the suit during testing. Respiratory protection was provided by a Survivair™ Powered Air Purifying Respirator (PAPR). A butyl rubber hood was worn with the respirator and placed beneath the integral hood of the jacket. A picture of a test participant wearing the Mark IV is shown in Figure 1. Three sizes were used in testing: two small, 12 medium, and 6 large. The specifications for each of these suit sizes are listed in Table 1.

Table 1. Mark IV Suit Size Comparison Chart

Nominal Siz	e NATO Size	Height	Chest	Stock Number
Small	6070/9505	170 cm	100 cm	8415-99-130-6922
Medium	7080/9205	180 cm	100 cm	8415-99-130-6923
Large	8090/0515	190 cm	108 cm	8415-99-130-6924

^{*} When this work was conducted the U.S. Army Edgewood Chemical Biological Center (ECBC) was known as the U.S. Army Edgewood Research, Development and Engineering Center (ERDEC).



Figure 1. The Mark IV Overgarment

1.2 Description of the Kappler CPF3 Protective Suit

The Kappler CPF3 (Figure 2) is a one-piece suit with integrated booties and hood. The PAPR respirator and Toxicological Agent Protective (TAP) boots were worn with the suit during testing. Four sizes were used in the tests: six 2XL, nine XL, seven L and two M.



Figure 2. The Kappler CPF3 Protective Suit

2. SCOPE

Testing was conducted according to guidelines set forth by the Joint Services Lightweight Integrated Suit Technology (JSLIST) working group, specifying test methods capable of accurately measuring a protection factor (PF) greater than 1,000 (the maximum PF that could accurately be measured in these tests was approximately 10,000). Passive sampling devices (PSDs) were mounted beneath the clothing of each participant to sample chemical simulant vapors at a rate consistent with the body's uptake rate of agent. The PSD uptake rate had been determined in an earlier JSLIST research study².

In each of the trials conducted with the Mark IV and CPF3, test participants were exposed to a high concentration of methyl salicylate (MeS) vapor. Methyl salicylate, a mustard (HD) agent simulant used by the U.S. Army for more than 50 years, had been selected by the JSLIST working group for use in testing under the JSLIST program⁴. Each trial exposed test participants to an MeS concentration of approximately 50 mg/m³ in a chamber for 30 minutes while performing a series of exercises.

3. TEST EQUIPMENT AND PROCEDURES

3.1 Test Facility

Testing was conducted in building E5354 of the Edgewood Area of Aberdeen Proving Ground, MD. The exposure chamber is 40 ft by 20 ft by 14 ft high and contains an evaporative-blower vapor generator controlled by a data acquisition system (DAS) with feedback concentration readings generated by a Foxboro Miniature Infra-Red Gas Analyzer (MIRAN®). The challenge concentration in the chamber was measured during the exposure period with two MIRAN®s. The location of the MIRAN®'s sampling points were in front of the chamber in the area where the subjects performed the exercises, and in the rear of the chamber. All MIRAN® readings were recorded by the DAS.

A four stage clean-room was erected in a bay area adjacent to the exposure chamber and was used during application and removal of the PSDs. The clean-room consisted of two airlocks and two 16-ft enclosures of the U.S. Army M28 shelter system. The enclosures, made of a chemically resistant plastic material, were pressurized with filtered air from Nuclear, Biological, and Chemical (NBC) filter units of the M28. A 600 cfm unit was used to pressurize the clean room area (Enclosure 4 of Figure 3), and two 200 cfm units were used to pressurize the doffing room area (Enclosure 2 of Figure 3), for a total clean airflow of 1000 cfm. A layout of the test area and apparatus is shown in Figure 3.

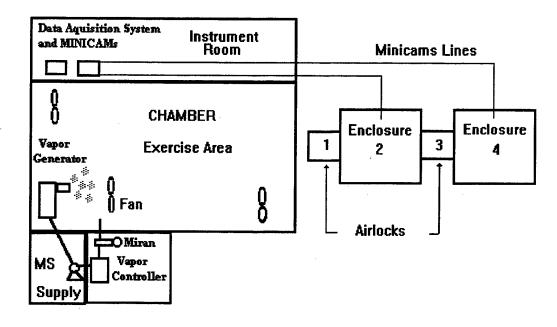


Figure 3. Chamber and Clean-Room Layout

3.2 Air Sampling Devices for Measuring Concentration Inside the Suit

PSDs were used to sample MeS vapor beneath the suit (Figure 4). Each PSD contains 40 mg of the purified solid adsorbent material Tenax[®] TA in a small plastic polyethylene pouch. The MeS vapor diffuses through a layer of polyethylene film and is absorbed by the Tenax[®] TA adsorbent. The sampler flow rate is governed by the (known) rate of diffusion (molecular transport) through the polyethylene film.

The sampler flow rate for the PSDs has been determined experimentally¹ to average 14.63 cm³/min with a standard deviation of 0.13 cm³/min. The adsorption velocity, or uptake rate, of the PSDs (sampler flow rate divided by the effective sampling surface area of 3.78 cm²) is 3.86 cm/min; this velocity approximates the rate at which chemical agent vapors permeate human skin.

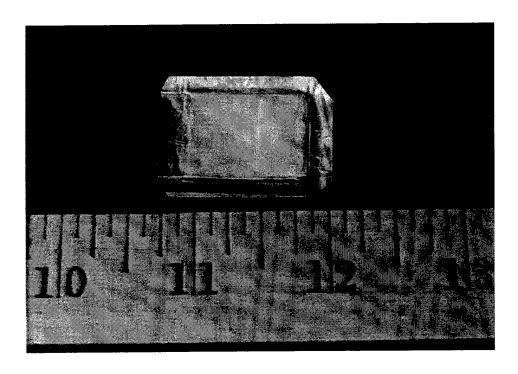


Figure 4. Passive Sampling Device

3.3 Procedures for Challenging the Mark IV and Kappler CPF3

PSDs were placed on the skin or underclothing of each test participant in the 17 locations depicted in Figure 5.

The clean room was pressurized with filtered air for at least 14 hours before each test, to minimize the potential for contamination of the PSDs by trace amounts of MeS in the air during donning of the suits. The clean room air was monitored throughout the entire test period using Miniature Automatic Continuous Air Monitoring Systems (MINICAMs™). In addition, three PSDs were opened in the clean room (enclosure 4, Figure 3) to measure the amount of background MeS which may have been adsorbed by the PSDs during the donning and doffing periods.

The chamber was prepared by bringing the MeS concentration to 50 mg/m³ before the participants exited the clean room. Temperature, relative humidity, and concentration readings in the chamber and in both clean-air rooms were recorded on the DAS.

Test participants entered the clean room to have the passive samplers applied by test technicians. After donning their suits the participants were given a final check to ensure proper closure of all the gas tight zippers and an exterior sampler was placed on the outside of the suit.

Once dressed, the participants passed through the transition airlock (enclosure 3 of Figure 3), the doffing room (enclosure 2 of Figure 3) and exited through the entry/exit airlock (enclosure 1 of Figure 3) where they were met by a test technician who escorted them into the chamber. This procedure took approximately five minutes.

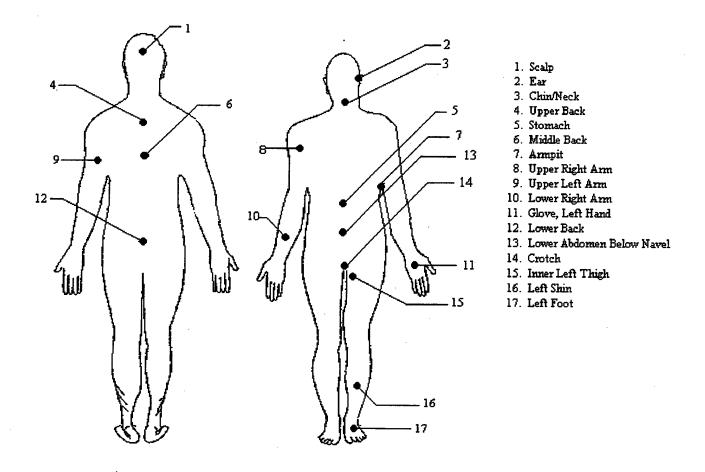


Figure 5. PSD Sample Locations

Once inside the chamber, the subjects performed each of the activities listed in Table 2 for one minute. These exercises were repeated two times during the 30-minute exposure interval.

Table 2. Activities Performed During MIST Tests

Description of Activity
Stationary Run One Minute
Jumping Jacks Two Times
Trunk Twisters Two Times
Bend and Reach Two Times
Back Stretcher Two Times
Bent Knee Leg Lifts Left and Right Ten Times
Vertical Reach and Grasp Left and Right One Minute
Lift Box From Floor to Table and Return One Time
Squat Down, Kneel On One Knee Three Times

3.4 **Procedures for Removing PSDs**

The suit desorbs significant quantities of MeS after exposure to a high concentration of vapors so care was taken to prevent contamination of the samples. The suits were doffed following the procedures outlined below.

- Enclosure 1 Entry/Exit Airlock (4 ft by 4 ft). The participants exited the chamber, entered the airlock and set the purge timer for 5 minutes. They remained fully dressed while airflow through the airlock purged any vapors brought in with them. This period also allowed for some desorption of MeS vapor from the outer surfaces of the ensemble.
- Enclosure 2 Doff Room (16 ft by 20 ft). After the 5 minute purge in enclosure 1 the participants entered the doff room and removed their ensemble with the assistance of a test technician. Suits, overboots, and masks were placed in plastic bags.
- Enclosure 3 Transition Airlock (4 ft by 4 ft). The participants passed through this area from the doff room into the clean room without delay.
- Enclosure 4 Clean Room (16 ft by 20 ft). The PSDs were removed from the participants and placed on data sheets according to their position on the body. The participants then exited the clean room through enclosure 3.

3.5 **Procedures for Analyzing Samples**

After each test, the sorbent was collected from each PSD into labeled stainless steel sorbent tubes. Then the sorbent tubes were analyzed on the Perkin Elmer Autosystem gas chromatographic (GC) system, which includes the Automatic Thermal Tube Desorber (ATD-400) and the Turbochrom data acquisition system. Analysis was performed according to guidelines from the JSLIST research study³. The GC system measured and reported the mass of MeS present in each sorbent tube. The maximum PF which could be calculated from PSD data depended upon the duration of the test and the sensitivity of the GC/PSD system.

3.6 Quality Assurance/Quality Control Procedures

Tenax TA sorbent provided to the manufacturer of the PSDs was purified and certified clean by an independent laboratory at Pennsylvania State University. The purification process involved supercritical liquid extraction followed by heating and purging with a carrier gas. The adsorbent was then analyzed by a gas chromatograph to ensure adequacy of the cleaning; strict purity protocol requirements were followed.

The MIRANs® which controlled the level of MeS vapor in the test chamber were calibrated prior to testing.

4. RESULTS AND DISCUSSION

Results of the testing of the Mark IV and Kappler CPF3 suits are summarized in Tables 3 and 4 respectively. Complete test data is listed in Appendix B.

Table 3. Summary of BRHA Results of the Mark IV

		l l	Nerve Agent Dat	a		
			Systemic	MREDs	Blister A	gent Data
Suit No.	Suit Size	Overall PF	(Headache)	(Nausea)	Local MRED	Affected Body
	L	·				Region
1	M	307	3074	7684	35659	Scrotum
2	L	240	2401	6002	11268	Scrotum
3	M	378	3779	9448	28431	Scrotum
4	M	363	3632	9081	9539	Scrotum
5	L	249	2485	6213	6531	Scrotum
6	L	453	4529	11322	21863	Scrotum
7	S	348	3478	8695	7867	Scrotum
8	M	379	3793	9481	21177	Scrotum
9	L	668	6678	16696	19083	Scrotum
10	M	449	4492	11229	14838	Scrotum
11	L	386	3861	9652	49219	Scrotum
12	M	292	2922	7304	36818	Scrotum
13	M	337	3372	8431	27389	Scrotum
14	M	218	2182	5456	24464	Ears
15	L .	379	3786	9464	20145	Scrotum
16	M	351	3505	8763	28479	Scrotum
17	L	248	2485	6212	6565	Scrotum
18	M	244	2444	6110	17176	Scrotum
19	M	200	2003	5008	6988	Scrotum
20	S	186	1859	4648	9454	Scrotum
Average		304	3044	7610	17963	

The average overall protection factor of the Mark IV measured in these tests was 304 (Table 3). The minimum exposure dosage (Systemic MRED), or the nerve agent dosage required to produce an endpoint reaction, was found to be 3044 mg-min/m³ for headache and 7610 mg-min/m³ for nausea. The Localized MRED, the minimum required exposure dosage necessary to produce erythmea (reddening of the skin) resulting from mustard agent (HD) exposure, was 17963 mg-min/m³.

In comparison, the Kappler CPF3 (Table 4) had an average overall protection factor of 678. The Systemic MRED for headache was 6776 mg-min/m³ and 16940 mg-min/m³ for nausea. The Localized MRED (erythmea) was found to be 33683 mg-min/m³.

Table 4. Summary of BRHA Results of the Kappler CPF3

			Nerve Agent Date		Î	
			Systemic	MREDs	Blister A	gent Data
Suit No.	Suit Size	Overall PF	(Headache)	(Nausea)	Local MRED	Affected Body Region
1	XL	718	7181	17952	34558	Scrotum
2	XXL	605	6045	15113	97886	Upper Back
3	L	361	3605	9013	9148	Scrotum
4	XL	549	5486	13715	32661	Chin/Neck
5	XXL	621	6212	15530	65969	Scrotum
6	L	692	6924	17311	31809	Scrotum
7	L	658	6576	16439	18876	Scrotum
8	M	488	4880	12200	14823	Scrotum
9	XĹ	412	4121	10302	31879	Chin/Neck
10	XXL	665	6649	16622	75413	Scrotum
11	L	586	5858	14645	10442	Scrotum
12	XL	660	6604	16509	39386	Scrotum
13	XXL	439	4388	10969	17301	Scrotum
14	XXL	424	4242	10606	23516	Scrotum
15	L	679	6795	16987	30451	Scrotum
16	XL	636	6359	15896	10505	Scrotum
17	M	1919	19193	47983	63781	Chin/Neck
18	XXL	165	1646	4116	16890	Chin/Neck
19	L	293	2933	7334	8545	Scrotum
20	L	692	6922	17306	17175	Scrotum
21	XL	1055	10548	26371	32529	Scrotum
22	XL	928	9277	23192	84569	Chin/Neck
23	XL	484	4839	12098	10935	Scrotum
24	XL	1534	15336	38340	29355	Scrotum
Average		678	6776	16940	33683	

5. CONCLUSION

Both the Mark IV and the Kappler CPF3 provided acceptable PFs. The Kappler CPF3, a one-piece ensemble with integral booties, had a higher average overall PF then the Mark IV, which is a two-piece ensemble similar to the U.S. Army's BDO. Overall PFs are dependent on factors such as the number and size of closures and type of respirator worn. Since both suits used the PAPR respirator, the role of closures can be seen in the difference in overall PFs. Additionally, by wearing the hood of the PAPR inside the suit, both the Mark IV and Kappler CPF3 had the exhalation air from the PAPR directed in the suit creating a slight overpressure. This overpressure improves PF by offering resistance against contaminated vapors infiltrating through the suit closures.

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APPENDIX A-Method of Analysis

PSD Concentrations and Protection Factors

The concentration of MeS (C MeS) sampled by each interior PSD was calculated by dividing the total mass (g) of MeS on each PSD measured in the GC analysis by the product of the sampler flow rate of the PSDs (in/min) multiplied by the test duration of each PSD (minutes) (see equation 1). The average mass from the background PSD samples was subtracted from each sample's mass before calculating the concentration to correct for incidental MeS vapor exposure of the PSDs during donning, doffing, and transfer. Background samples were exposed to the air inside the clean room during the entire interval from the start of PSD application until the sorbent from the PSDs was removed and packed in GC sample tubes. The PSD concentration for each location was calculated using the following equation:

$$C_{MeS} = \frac{(MassofMeSfromPSD) - (MassofMeSfromBackground)}{(SamplerFlowRateofPSD) \times (ExposureTime)}$$
[1]

Each PSD concentration was converted into a dosage by multiplying by the exposure time. The mean concentration of MeS in the chamber was extracted from MIRAN® data, and the total exposure dosage was calculated by multiplying it by the exposure time. This value was used in the calculations of protection factor (PF).

Sampler Location PFs were determined by dividing the exposure dosage by the dosage detected inside the suit at each PSD location. The PF calculation is expressed mathematically in equation 2:

$$PF_{SL} = \frac{ExposureDosage}{(PSDConcentration) \times (ExposureTime)}$$
[2]

 PF_{SL} values were tabulated for each PSD location. First, the average mass of MeS collected on the background PSDs, plus one standard deviation, was subtracted from the MeS mass collected on each PSD. If the resulting mass was greater than zero, then the analysis methods outlined above were performed. If the resulting mass was less than zero, the PSD was considered not to have sampled any MeS during the exposure time, and the maximum PF for that test was assigned for that PSD location. The maximum PF_{SL} for each test was determined by dividing the exposure dosage by the minimum detectable dosage.

The minimum detectable dosage of MeS that can be measured with the combined PSD/gas chromatograph system during these tests was determined from the variability of analyzed PSDs in a study that measured the overall mass of MeS on a set of 25 similarly-handled PSDs. The average mass detected on the variability sample was $34.81~\eta g$ with a standard deviation of $6.98~\eta g$. The standard deviation of these PSDs is the value that was used as the smallest mass of MeS detectable by the PSD/GC system.

Calculation of Overall Protection Factors

The overall PF of each suit was determined by using the Body Region Hazard Analysis (BRHA) process developed by Fedele and Nelson¹, which is based upon the amount of agent that must be absorbed percutaneously (through the skin) in each of 27 different body areas to produce mean end-point reactions. In the model, the mean end-point reaction is the symptom that occurs in 50% of individuals exposed to the agent dosage. For exposure to nerve agent (GB) the first significant symptom is headache. Reddening of the skin (similar to severe sunburn) is the first mean end-point reaction for exposure to the blister agent, mustard (HD).

The 17 values of PF_{SL} are used to calculate the Protection Factors for each of the 27 body regions (PF_{BR}). This is accomplished by choosing and weighting the sampler locations to represent the body regions as shown in Table A-1.

Table A-1. Calculating Body Region PF from Sampler Location PF

		Sampler	
	Body Region	Locations	Calculation
	, ,	Used	
1	Scalp	1	$BR_1 = SL_1$
2	Ears	2, 18	$BR_2 = (SL_2 + SL_{18})/2$
3	Cheeks & Neck	2, 18	$BR_3 = (SL_2 + SL_{18})/2$
4	Chin & Neck	3	$BR_4 = SL_3$
5	Nape	4	BR ₅ = SL ₄
6	Abdomen	5, 7, 13	$BR_6 = [2(SL_5) + SL_7 + SL_{13}]/4$
7	Back	4, 6, 12, 7	$BR_3 = [2SL_4 + 2SL_6 + 2SL_{12})/9] + [SL_7/3]$
8	Axillae	7	BR ₈ = SL ₇
9	Upper arms, med.	8	BR ₉ = SL ₈
10	Upper arms, lat.	9	BR ₁₀ = SL ₉
11	Elbowfolds	8, 10	$BR_{11} = (SL_8 + SL_{10})/2$
12	Elbows	9, 10	$BR_{12} = (SL_9 + SL_{10})/2$
13	Forearms, volar	10	$BR_{13} = SL_{10}$
14	Forearms, dorsum	10	$BR_{14} = SL_{10}$
15	Hands, dorsum	11	$BR_{15} = SL_{11}$
16	Hands, palmar	11	$BR_{16} = SL_{11}$
17	Buttocks	12	$BR_{17} = SL_{12}$
18	Groin	13, 14	$BR_{18} = (SL_{13} + SL_{14})/2$
19	Scrotum	14	$BR_{19} = SL_{14}$
20	Thighs, ant	15	$BR_{20} = SL_{15}$
21	Thighs, pos	15	$BR_{21} = SL_{15}$
22	Knees	15, 16	$BR_{22} = (SL_{15} + SL_{16})/2$
23	Popliteal Space	15, 16	$BR_{23} = (SL_{15} + SL_{16})/2$
24	Shins	16	$BR_{24} = SL_{16}$
25	Calves	16	$BR_{25} = SL_{16}$
26	Feet, dorsum	17	$BR_{26} = SL_{17}$
27	Feet, plantar	17	$BR_{27} = SL_{17}$

The overall PFs for nerve and blister agents require separate calculations. For nerve agent, the overall PF is based on the PF values and sensitivities for the 27 individual defined

body regions. This approach is used because nerve agents produce a systemic rather than a localized response in the individual. When the overall PF for nerve agents is multiplied by 10 mg-min/m³ (which is the minimum dosage of the nerve agent (VX or GB) that an unprotected individual must absorb through their skin to develop end-point reactions) the systemic Minimum Required Exposure Dosage (MRED_s) value is obtained. It is assumed, for this model, that the systemic effects of VX absorbed percutaneously are comparable to those of GB. Quantitative empirical data is available for VX, but it is GB which is the greater vapor hazard, because of its higher volatility.

The initial effects of HD are localized to specific body regions because the skin reacts directly to the HD dosage. The PF for HD is expressed as a localized MRED_{HD}. This was calculated by multiplying the PF for each body region by the dosage which is known to produce mean end-point skin reactions. The *lowest* calculated MRED_{HD} value, along with the skin area affected, characterizes the protective capability of the suit and areas of susceptibility to HD. A detailed description of both of these methods and equations used to calculate the overall PF using the BRHA process is presented below.

Systemic Effect - Nerve Agent (GB)

The BRHA process uses the dosage known to be required at each body region to cause a systemic nerve agent effect (end-point reaction). These dosages, known as the "VX dose," are listed in Table A-1. The VX dose for each body region divided into the skin area of that region is called the "A/D Factor. The A/D factor represents the relative sensitivity of each body region to nerve agent exposure. The overall PF of the suit is calculated from the local PFs for each body region and the A/D factor for each body region as shown in equation 3.

$$(OverallPF) = \frac{\sum (A/D)_{i}}{\sum [(A/D)_{i} \times (PF)_{i}]}$$
[3]

where PF_i is the protection factor measured at body region i=1, 2,... 27, and $(A/D)_i$ is the A/D Factor at body region i=1, 2,... 27. Because this portion of the Fedele BRHA model was developed using data taken from controlled human exposure to the nerve agent VX, the Overall PF is then multiplied by the minimum dosage of VX to which an unprotected individual must be percutaneously exposed in order to develop specific end-point reactions (symptoms). For the end-point reaction of headache, that dosage is 10 mg-min/m^3 . For the end-point reaction of nausea and vomiting, that dosage is 25 mg-min/m^3 . This product (Equation 4) is called the Systemic Minimum Required Exposure Dosage (MREDs), and it represents the minimum exposure dosage of nerve agent vapor which would produce the end-point reactions in an individual wearing the protective ensemble under test.

$$MRED_s = (OverallPF) \times (10 \, mg - min/m^3)$$
 [4]

Localized Effect - Blister Agent (HD)

A second calculation procedure from the BRHA process was used to determine the minimum exposure dosages required to cause a specific end-point reaction when the suit wearer is exposed to HD vapor. In this case, the end-point reaction was erythema (reddening of the skin, similar to severe sunburn). Because the minimum dosages of HD which produce erythema are not cumulative and normally affect only the localized body regions exposed, the model predicts MREDs for each body region based upon the PF value and skin sensitivity for each body region. The lowest of these dosages is considered the Minimum Required Exposure Dosage for HD (MRED_{HD}) for the ensemble tested.

Listed in Table A-2 are the known Local Exposure Dosages for HD (LED_{HD}) used by the model. The LED_{HD} values for each body region were multiplied by the PF value for that body region to obtain the MRED required to cause erythema at that body location (Equation 5).

$$MRED_i = (LED_i) \times (PF_i)$$
 [5]

where LED_i is the localized exposure dosage for body region i = 1, 2, ... 27, and PF_i is the protection factor measured at body region i = 1, 2, ... 27. The lowest value is the $MRED_{HD}$ for the ensemble tested, and the body region where that value occurs is where erythema would first occur.

Table A-2. BRHA Model Parameters Used to Calculate MRED

	Body Region	Area, cm ²	VX Dose, mg	Local Unprotected MRED for HD, mg-min/m ³
1	Scalp	350	0.76	271
2	Ears	50	0.46	164
3	Cheeks & Neck	100	0.48	. 171
4	Chin & Neck	200	0.36	129
5	Nape	100	1.72	614
6	Abdomen	2858	2.23	796
7	Back	2540	2.65	946
8	Axillae	200	2.07	739
9	Upper Arms, med.	488	2.80	1000
10	Upper Arms, lat.	706	6.57	2346
11	Elbowfolds	50	2.09	746
12	Elbows	50	2.25	804
13	Forearms, volar	487	2.80	1000
14	Forearms, dorsum	706	6.57	2346
15	Hands, dorsum	200	2.91	1039
16	Hands, palmar	200	9.24	3300
17	Buttocks	953	4.26	1521
18	Groin	300	1.22	436
19	Scrotum	200	0.11	39
20	Thighs, ant	2845	6.57	2346
21	Thighs, pos	1422	4.26	1521
22	Knees	200	7.14	2550
23	Popliteal Space	100	2.09	746
24	Shins	1897	6.57	2346
25	Calves	948	2.80	1000
26	Feet, dorsum	500	6.60	2357
27	Feet, plantar	300	7.14	2550

Blank

APPENDIX B TEST DATA

		Section of For Data, Calculations and Desurts	Jaia, Jaion	ומווס פווסוומו	COLLED	
					MeS, mg-	
			MeS, ng	MeS, mg/m ³	min/m ³	
				Mean Local	Pocal	
			Corrected for	Concentration	Dosage at	PF at PSD
	PSD No.	PSD Location	Background	at PSD	PSD	Location
	_	Scalp	99:99	0.13	3.87	437
-	2	Ear	8.79	0.02	09.0	2810
	တ	Chin/Neck	81.18	0.18	5.55	304
	4	Upper Back/Nape	42.41	0.10	2.90	582
	ည	Abdomen	38.42	0.09	2.63	643
	9	Middle Back	47.08	0.11	3.22	525
	7	Armpit (Axillae)	37.37	0.09	2.55	199
	©	Right Arm, Inner	61.30	0.14	4.19	403
	o	Left Arm, Outer	83.17	0.19	5.68	297
	2	Rt. Forearm, Inner	54.72	0.12	3.74	451
	=	Left Hand/Glove	66.91	0.15	4.57	369
	27	Lower Back	77.04	0.18	5.27	321
	13	Groin	43.88	0.10	3.00	563
	14	Crotch	27.01	90.0	1.85	914
	15	Inner Left Thigh	229.51	0.52	15.69	108
	16	Inner Left Shin	221.79	0.51	15.16	#
	11	Left Foot/Boot	343.66	0.78	23.49	75
		Background 1:	70.99			
		Background 2:	88.01			
		Background 3:	81.96			
		Average Background:	80.32			

Section 1 - Summary of Results	ary of Result	ø
Date of Test:	24-Mar-98	
Suit No. Size:	- 2	
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	8	
Mean Agent Challenge, mg/m ³ :	56.27	
Overall PF:	307	
MRED (HD), Body Region:	35659	Scrotum
Systemic MRED (VX), Headache:	3074	
Systemic MRED (VX), Nausea:	7684	
Exposure Dosage, mg-min/m ³ :	1688	
Section 2 - Factors, Calculations and Notes	ulations and	Notes
Sampler Flow Rate, cm³/min	14.63	
Min GC-Detectable Mass, ng:	6.98	

Below Background Level

0.016 3540 80.32 34.8065 0.00

Min GC-Detectable Concentration:

Maximum Measureable PF:

Background Level, ng:
Blank Mass
Avg Non-MS Peak
BBL

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	sults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	1
DS ON	PSD Location	Corrected for Background	Concentration at PSD	Dosage at PSD	Pr at PSU Location
-	Scalp	58.12	0.13	3.97	425
2	Ear	80.02	0.18	5.47	309
9	Chin/Neck	44.58	0.10	3.05	554
4	Upper Back/Nape	62.09	0.15	4.59	368
2	Abdomen	27.68	0.13	3.94	428
9	Middle Back	135.22	0.31	9.24	183
7	Armpit (Axillae)	410.98	0.94	28.09	99
8	Right Arm, Inner	53.97	0.12	3.69	458
о	Left Arm, Outer	64.95	0.15	4.44	380
9	Rt. Forearm, Inner	212.54	0.48	14.53	116
=	Left Hand/Glove	126.01	0.29	8.61	196
4	Lower Back	129.27	0.29	8.84	191
13	Groin	113.49	0.26	7.76	218
4	Crotch	85.48	0.19	5.84	289
15	Inner Left Thigh	92:02	0.21	6.29	268
16	Inner Left Shin	140.47	0.32	9.60	176
17	Left Foot/Boot	267.00	0.61	18.25	8
	Background 1:	70.99			
	Background 2:	88.01			
	Background 3:	81.96			
,	Average Background:	80.32			

Date of Test: 24-Mar-98 Suit No. 2 Size: L Test Participant: Identify Subj. Configuration: Mark IV Duration of Test, min: 30 Mean Agent Challenge, mg/m³: 56.27 Overall PF: 240 MRED (HD), Body Region: 11268 Systemic MRED (VX), Headache: 2401 Systemic MRED (VX), Nausea: 6002 Exposure Dosage, mg-min/m³: 1688	Section 1 - Summary of Results	ry of Results		
ricipant: Identify Subj. ration: Mark IV s of Test, min: 30 gent Challenge, mg/m³: 56.27 PF: 240 HD), Body Region: 11268 c MRED (VX), Headache: 2401 c MRED (VX), Nausea: 6002 e Dosage, mg-min/m³: 1688	Date of Test:	24-Mar-98		
L Participant: Identify Subj. yuration: Mark IV on of Test, min: 30 Agent Challenge, mg/m³: 56.27 II PF: 240 II PF: 240 mic MRED (VX), Headache: 2401 mic MRED (VX), Nausea: 6002 sure Dosage, mg-min/m³: 1688	Suit No.	2		
Identify Subj. Mark IV 30 56.27 240 11268 16: 2401 1688	Size:	_	e	
Mark IV 30 56.27 240 11268 16: 2401 1688	Test Participant:	Identify Subj.		
30 56.27 240 11268 16: 2401 1688	Configuration:	Mark IV		
56.27 240 11268 16: 2401 6002 1688	Duration of Test, min:	93		
240 11268 ie: 2401 6002 1688	Mean Agent Challenge, mg/m3:	56.27		
11268 dache: 2401 sea: 6002 fm³: 1688	Overall PF:	240		
dache: sea: m ³ :	MRED (HD), Body Region:	11268	Scrotum	
	Systemic MRED (VX), Headache:	2401		
	Systemic MRED (VX), Nausea:	6002		
	Exposure Dosage, mg-min/m3:	1688		

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3540
Background Level, ng:	80.32
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

		July July	Section 9 - 1 3D Data, Calculations and nesults	2000	
		MeS no	MeS ma/m³	MeS, mg- min/m3	
		200	Mean Local	Local	
ON COO	20000	Corrected for	Concentration	Dosage at	PF at PSD
-	Scalo	44.73	0.10	3.06	556
2	Ear	47.19	0.11	3.23	527
9	Chin/Neck	26.72	90:0	1.83	930
4	Upper Back/Nape	125.74	0.29	8.59	198
2	Abdomen	58.85	0.13	4.02	422
9	Middle Back	30.03	0.07	2.05	828
7	Armpit (Axillae)	58.85	0.13	4.02	422
œ	Right Arm, Inner	28.33	90.0	1.94	877
6	Left Arm, Outer	90.00	0.21	6.15	276
9	Rt. Forearm, Inner	258.80	0.59	17.69	96
=	Left Hand/Glove	93.69	0.21	6.40	265
5	Lower Back	38.75	0.09	2.65	641
5	Groin	29.89	0.07	2.04	832
14	Crotch	34.10	0.08	2.33	729
15	Inner Left Thigh	61.44	0.14	4.20	405
16	Inner Left Shin	216.68	0.49	14.81	115
1	Left Foot/Boot	78.75	0.18	5.38	316
	Background 1:	70.99			
	Background 2:	88.01			
	Background 3:	81.96			
	Average Background:	80.32			

Section 1 - Summary of Results	ary of Result	8
Date of Test:	24-Mar-98	
Suit No.	က	
Size:	Σ	
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	8	
Mean Agent Challenge, mg/m³:	56.64	
Overall PF:	378	
MRED (HD), Body Region:	28431	Scrotum
Systemic MRED (VX), Headache:	3779	
Systemic MRED (VX), Nausea:	9448	
Exposure Dosage, mg-min/m ³ :	1699	

L	
Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3563
Background Level, ng:	80.32
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

		Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	sults	
					MeS, mg-	
			MeS, ng	MeS, mg/m ³	min/m3	
			To produce for	Mean Local	Local	DE at DSF
	PSD No.	PSD Location	Background	at PSD	PSD	Location
	-	Scalp	46.36	0.11	3.17	536
	7	Ear	48.60	0.11	3.32	512
	က	Chin/Neck	38.68	0.09	2.64	643
	4	Upper Back/Nape	75.44	0.17	5.16	330
	က	Abdomen	30.96	0.07	2.12	803
	9	Middle Back	32.79	0.07	2.24	758
	7	Armpit (Axillae)	32.79	0.07	2.24	758
	∞	Right Arm, Inner	31.13	0.07	2.13	799
	6	Left Arm, Outer	10.11	0.02	0.69	2459
	.01	Rt. Foream, Inner	73.01	0.17	4.99	340
	=	Left Hand/Glove	127.65	0.29	8.73	195
	12	Lower Back	69.94	0.16	4.78	355
٠	13	Groin	20.96	0.05	1.43	1186
	4	Crotch	101.64	0.23	6.95	245
	15	Inner Left Thigh	130.78	0:30	8.94	190
	16	Inner Left Shin	94.27	0.21	6.44	264
	14	Left Foot/Boot	79.69	0.18	5.45	312
		Background 1:	70.99			
		Background 2:	88.01			
		Background 3:	81.96			
		Average Background:	80.32			

Section 1 - Summary of Results	ary of Results	•
Date of Test:	24-Mar-98	·
Suit No.	4	
Size:	Σ	
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	39	
Mean Agent Challenge, mg/m ³ :	56.64	
Overall PF:	363	
MRED (HD), Body Region:	9539	Scrotum
Systemic MRED (VX), Headache:	3632	
Systemic MRED (VX), Nausea:	9081	
Exposure Dosage, mg-min/m ³ :	1699	
Section 2 - Factors, Calculations and Notes	culations and	Notes
Sampler Flow Rate, cm ³ /min	14.63	
Min GC-Detectable Mass, ng:	. 6.98	
Min GC-Detectable Concentration:	0.016	
Maximum Measureable PF:	3563	

80.32 34.8065 0.00 Below Background Level

Background Level, ng: 'Blank Mass' Avg Non-MS Peak BBL

Section 1 - Summary of Results	ary of Results		Sec
Date of Test:	26-Mar-98		
Suit No.	വ	PSD No.	PSD
Size:		1 .	Scalp
Test Participant:	Identify Subj.	 2	Ear
Configuration:	Mark IV	က	Chin/Nec
Duration of Test, min:	30	4	Upper Ba
Mean Agent Challenge, mg/m3:	. 54.59	5	Abdomen
Overall PF:	249	9	Middle Ba
MRED (HD), Body Region:	6531 Scrotum	7	Ampit (A
Systemic MRED (VX), Headache:	2485	80	Right Am
Systemic MRED (VX), Nausea:	6213	6	Left Arm,
Exposure Dosage, mg-min/m ³ :	1638	9	Rt. Forea

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3434
Background Level, ng:	62.22
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
188	Below Background Level

	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	esults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m ³	-
			Mean Local	Focal	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
٠ ١	Scalp	18.87	0.04	1.29	1270
7	Ear	150.12	0.34	10.26	160
ဇာ	Chin/Neck	37.84	0.09	2.59	633
4	Upper Back/Nape	2.81	0.01	0.19	8527
2	Abdomen	52.03	0.12	3.56	460
9	Middle Back	15.00	0.03	1.03	1597
7	Ampit (Axillae)	158.48	0.36	10.83	151
&	Right Arm, Inner	109.55	0.25	7.49	219
တ	Left Arm, Outer	22:02	0.05	1.51	1088
2	Rt. Forearm, Inner	176.91	0.40	12.09	135
=	Left Hand/Glove	1821.59	4.15	124.51	13
12	Lower Back	8.85	0.02	09:0	2707
5	Groin	24.57	90:0	1.68	975
4	Crotch	143.08	0.33	9.78	167
5	Inner Left Thigh	12.44	0.03	0.85	1926
16	Inner Left Shin	204.18	0.47	13.96	117
17	Left Foot/Boot	57.05	0.13	3.90	420
	Background 1:	60.31			
	Background 2:	64.93			
	Background 3:	61.42			
	Average Background:	62.22			

Section 1 - Summary of Results	ary of Results	
Date of Test:	26-Mar-98	
Suit No.	9	
Size:		
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	8	
Mean Agent Challenge, mg/m³:	54.59	
Overall PF:	453	
MRED (HD), Body Region:	21863	Scrotum
Systemic MRED (VX), Headache:	4529	
Systemic MRED (VX), Nausea:	11322	
Exposure Dosage, mg-min/m3:	1638	

Sampler Flow Rate, cm³/min Min GC-Detectable Mass, ng:	w Rate, cm³/min 14.63 ectable Mass, ng: 6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3434
Background Level, ng:	62.22
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	ssuits	
		MeS, ng	MeS, mg/m ³	MeS, mg- min/m3	
			Mean Local	Local	1000
PSD No.	PSD Location	Corrected for Background	Concentration at PSD	Dosage at PSD	rr at rou Location
-	Scalp	54.90	0.13	3.75	436
2	Ear	59.26	0.14	4.05	404
က	Chin/Neck	62.61	0.14	4.28	383
4	Upper Back/Nape	67.10	0.15	4.59	357
2	Abdomen	75.33	0.17	5.15	318
9	Middle Back	42.78	0.10	2.92	260
7	Armpit (Axillae)	36.70	0.08	2.51	653
8	Right Arm, Inner	36.91	0.08	2.52	649
6	Left Arm, Outer	26.77	0.13	3.88	422
10	Rt. Forearm, Inner	49.34	0.11	3.37	486
=	Left Hand/Glove	78.27	0.18	5.35	306
12	Lower Back	48.78	0.11	3.33	491
13	Groin	37.00	0.08	2.53	648
14	Crotch	42.74	0.10	2.92	561
15	Inner Left Thigh	50.82	0.12	3.47	471
16	Inner Left Shin	86.71	0.20	5.93	576
17	Left Foot/Boot	115.99	0.26	7.93	207
	Background 1:	60.31			
	Background 2:	64.93			
	Background 3:	61.42			
	Average Background:	62.22			

MeS, ng MeS, mg MeS, mg MeS, mg MeS, mg MeS, mg min/m3	-		Section 3 - PSD Data, Calculations and Results) Data, Calcu	18110113 81U D	COMED	
Scalp Corrected for Scap at PSD Location Corrected for Sand And Sand Location Corrected for Sand Location at PSD Location Corrected for Sand Location Corrected Corrected Location Corrected Corrected Corrected Location Corrected Cor				MeS, ng	MeS, mg/m ³	MeS, mg- min/m3	
PSD Location Corrected for Sand at PSD Concentration at PSD Dosage at PSD Scalp 53.73 0.12 3.67 Ear 103.62 0.24 7.08 Chir/Neck 22.23 0.05 1.52 Upper Back/Nape 81.73 0.19 5.59 Abdomen 120.73 0.28 8.25 Middle Back 179.06 0.41 12.24 Ampit (Axillae) 148.27 0.34 10.13 Hight Arm, Inner 19.56 0.04 1.22 Rt. Forearm, Inner 16.21 0.04 1.22 Rt. Forearm, Inner 16.21 0.04 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 62.22 7.51 B					Mean Local	Local	
Scalp 53.73 0.12 3.67 Ear 103.62 0.24 7.08 Chir/Neck 22.23 0.05 1.52 Upper Back/Nape 81.73 0.19 5.59 Abdomen 120.73 0.28 8.25 Middle Back 179.06 0.41 12.24 Armpit (Axillae) 148.27 0.34 10.13 Right Arm, Inner 19.56 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 2: 64.93 Background: 62.22 Background: 62.22 0.49 14.60		PSD No.	PSD Location	Corrected for Background	Concentration at PSD	Dosage at PSD	PF at PSD Location
Ear 103.62 0.24 7.08 Chir/Neck 22.23 0.05 1.52 Upper Back/Nape 81.73 0.19 5.59 Abdomen 120.73 0.28 8.25 Middle Back 179.06 0.41 12.24 Armpit (Axillae) 148.27 0.34 10.13 Right Arm, Inner 19.56 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 84.93 84.93 Background: 62.22 7.21		-	Scalp	53.73	0.12	3.67	447
Chir/Neck 22.23 0.05 1.52 Upper Back/Nape 81.73 0.19 5.59 Abdomen 120.73 0.28 8.25 Middle Back 179.06 0.41 12.24 Armpit (Axillae) 148.27 0.34 10.13 Right Arm, Inner 19.56 0.04 1.34 Left Arm, Outer 17.82 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 2: 64.93 8.15 Background 3: 61.42 0.49 14.60		7	Ear	103.62	0.24	7.08	232
Upper Back/Nape 81.73 0.19 5.59 Abdomen 120.73 0.28 8.25 Middle Back 179.06 0.41 12.24 Armpit (Axillae) 148.27 0.34 10.13 Right Arm, Inner 19.56 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 8c4.93 14.60 Average Background 3: 61.42 64.93 8c4.22		က	Chin/Neck	22.23	0.05	1.52	1081
Abdomen 120.73 0.28 8.25 Middle Back 179.06 0.41 12.24 Ampli (Axillae) 148.27 0.34 10.13 Right Arm, Inner 19.56 0.04 1.34 Left Arm, Outer 17.82 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 Background 3: 61.42 Average Background 3: 61.42 62.22		4	Upper Back/Nape	81.73	0.19	5.59	294
Middle Back 179.06 0.41 12.24 Ampit (Axillae) 148.27 0.34 10.13 Right Arm, Inner 19.56 0.04 1.34 Left Arm, Outer 17.82 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 8ackground 3: 61.42 Average Background 3: 61.42 62.22		ည	Abdomen	120.73	0.28	8.25	199
Amplit (Axillae) 148.27 0.34 10.13 Right Arm, Inner 19.56 0.04 1.34 Left Arm, Outer 17.82 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.09 2.74 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 8ackground 3: 61.42 Average Background 3: 61.42 62.22	-	9	Middle Back	179.06	0.41	12.24	134 4
Right Arm, Inner 19.56 0.04 1.34 Left Arm, Outer 17.82 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 64.93 8ackground 3: 61.42 Average Background: 62.22 62.22 62.22		7	Ampit (Axillae)	148.27	0.34	10.13	162
Left Arm, Outer 17.82 0.04 1.22 Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 Background 3: 61.42 Average Background: 62.22		80	Right Arm, Inner	19.56	0.04	1.34	1229
Rt. Forearm, Inner 40.14 0.09 2.74 Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 64.93 8ackground 3: 61.42 Background 3: 61.42 62.22 62.22		6	Left Arm, Outer	17.82	0.04	1.22	1349
Left Hand/Glove 16.21 0.04 1.11 Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 8ackground 3: 64.93 Background 3: 61.42 62.22		9	Rt. Forearm, Inner	40.14	0.09	2.74	299
Lower Back 25.77 0.06 1.76 Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 64.93 8ackground 3: 61.42 Average Background: 62.22 62.22 62.22		=	Left Hand/Glove	16.21	0.04	1.1	1483
Groin 10.06 0.02 0.69 Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 64.93 8ackground 3: 61.42 Average Background: 62.22 62.22 62.22		2	Lower Back	25.77	90.0	1.76	933
Crotch 119.17 0.27 8.15 Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 64.93 64.93 Background 3: 61.42 62.22			Groin	10.06	0.02	0.69	2390
Inner Left Thigh 109.82 0.25 7.51 Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 64.93 Background 3: 61.42 Average Background: 62.22			Crotch	119.17	0.27	8.15	202
Inner Left Shin 50.27 0.11 3.44 Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 60.31 Background 2: 64.93 64.42 Average Background: 62.22			Inner Left Thigh	109.82	0.25	7.51	219
Left Foot/Boot 213.54 0.49 14.60 Background 1: 60.31 Background 2: 64.93 Background 3: 61.42 Average Background: 62.22			Inner Left Shin	50.27	0.11	3.44	478
			Left Foot/Boot	213.54	0.49	14.60	113
			Background 1:	60.31			
			Background 2:	64.93			
			Background 3:	61.42			
			Average Background:	62.22			-

Section 1 - Summary of Results	ary of Results	
Date of Test:	26-Mar-98	
Suit No.	7	
Size:	ဟ	
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	90	
Mean Agent Challenge, mg/m³:	54.77	
Overall PF:	348	
MRED (HD), Body Region:	7867	Scrotum
Systemic MRED (VX), Headache:	3478	
Systemic MRED (VX), Nausea:	8695	
Exposure Dosage, mg-min/m³:	1643	
Section 2 - Factors, Calculations and Notes	ulations and N	lotes
Sampler Flow Rate, cm³/min	14.63	
Min GC-Detectable Mass, ng:	6.98	
Min GC-Detectable Concentration:	0.016	
Maximum Measureable PF:	3446	
Background Level, ng:	62.22	
'Blank Mass'	34.8065	
4vg Non-MS Peak	0.00	
18BL	Below Background Level	und Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	esults	
		,		MeS, mg-	
	,	MeS, ng	MeS, mg/m ³	min/m3	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	49.19	0.11	3.36	489
8	Ear	56.88	0.13	3.89	423
က	Chin/Neck	52.10	0.12	3.56	461
4	Upper Back/Nape	48.17	0.11	3.29	499
ß	Abdomen	38.21	0.09	2.61	629
9	Middle Back	40.05	0.09	2.74	601
7	Ampit (Axillae)	41.45	0.09	2.83	280
80	Right Arm, Inner	47.02	0.11	3.21	511
 6	Left Arm, Outer	56.35	0.13	3.85	427
9	Rt. Forearm, Inner	50.48	0.12	3.45	476
 =	Left Hand/Glove	118.08	0.27	8.07	204
 12	Lower Back	29.55	0.07	2.02	813
13	Groin	39.09	0.09	2.67	615
14	Crotch	44.27	0.10	3.03	543
15	Inner Left Thigh	46.27	0.11	3.16	520
16	Inner Left Shin	265.03	09:0	18.12	91
17	Left Foot/Boot	139.15	0.32	9.51	173
_	Background 1:	60.31			
	Background 2:	64.93			
	Background 3:				
	Average Background:	62.22			

Section 1 - Summary of Results	ry of Results
Date of Test:	26-Mar-98
Suit No.	ω
Size:	×
Test Participant:	Identify Subj.
Configuration:	Mark IV
Duration of Test, min:	30
Mean Agent Challenge, mg/m³:	54.77
Overall PF:	379
MRED (HD), Body Region:	21177 Scrotum
Systemic MRED (VX), Headache:	3793
Systemic MRED (VX), Nausea:	9481
Exposure Dosage, mg-min/m ³ :	1643
Section 2 - Factors, Calculations and Notes	ulations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3446
Background Level, ng:	62.22
Blank Mass	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

		Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Ro	esults	
					MeS, mg-	
	•		MeS, ng	MeS, mg/m ³	min/m ³	
				Mean Local		
·	PSD No.	PSD Location	Corrected for Background	Concentration at PSD	Dosage at PSD	PF at PSD Location
	-	Scalp	12.57	0.03	0.86	1979
	7	Ear	39.93	0.09	2.73	623
-	က	Chin/Neck	48.65	0.11	3.33	512
	4	Upper Back/Nape	14.70	0.03	1.01	1693
	လ	Abdomen	33.65	90.0	2.30	740
	9	Middle Back	26.12	90.0	1.79	953
	7	Armpit (Axillae)	46.20	0.11	3.16	539
	&	Right Arm, Inner	19.60	0.0	1.34	1270
	တ	Left Arm, Outer	51.64	0.12	3.53	482
	₽	Rt. Forearm, Inner	18.42	0.04	1.26	1351
	Ŧ	Left Hand/Glove	85.90	0.20	2.87	290
- 1	42	Lower Back	17.22	0.04	1.18	1445
	1 3	Groin	19.64	0.04	1.34	1267
	44	Crotch	50.86	0.12	3.48	489
	र्ट	Inner Left Thigh	22.78	0.05	1.56	1092
	9	Inner Left Shin	44.06	0.10	3.01	565
	17	Left Foot/Boot	198.57	0.45	13.57	125
		Background 1:	89.74			
		Background 2:	91.42			
		Background 3:	90.84			-
		Average Background:	29.67			

Section 1 - Summary of Results	nary of Result		
Date of Test:	31-Mar-98		İ
Suit No.	6		
Size:			
Test Participant:	Identify Subj.		
Configuration:	Mark IV		
Duration of Test, min:	၉	٠	
Mean Agent Challenge, mg/m3:	56.71		
Overall PF:	999		
MRED (HD), Body Region:	19083	Scrotum	
Systemic MRED (VX), Headache:	8299		
Systemic MRED (VX), Nausea:	16696		
Exposure Dosage, mg-min/m ³ :	1701		

Section 2 - Factors, Calculations and Notes

Below Background Level

90.67 34.8065 0.00

Background Level, ng:
'Blank Mass'
Avg Non-MS Peak
BBL

0.016 3568

Sampler Flow Rate, cm³/min Min GC-Detectable Mass, ng: Min GC-Detectable Concentration:

Maximum Measureable PF:

Section 1 - Summary of Results	ary of Results	
Date of Test:	31-Mar-98	
Suit No.	. 우	
Size:	Σ	
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	93	. -
Mean Agent Challenge, mg/m3:	56.71	
Overall PF:	449	
MRED (HD), Body Region:	14838	Scrotum
Systemic MRED (VX), Headache:	4492	
Systemic MRED (VX), Nausea:	11229	
Exposure Dosage, mg-min/m ³ :	1701	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3568
Background Level, ng:	29.67
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level
	•

MeS, ng MeS, mg/m³ MeS, mg/m³ Mesn Local Local Corrected for Concentration Dosage at Background 36.52 0.08 2.50 31.86 0.07 2.18 18.50 0.04 1.26 24.66 0.06 1.69 9.62 0.02 0.66 45.12 0.07 2.18 202.18 0.46 1.26 202.18 0.46 13.82 29.45 0.07 2.01 3.02 0.01 0.21 17.14 0.04 1.17 395.57 0.90 27.04 4.04 0.01 0.28 10.04 0.02 0.69 65.41 0.15 4.47 207.73 0.47 14.20 26.09 0.06 1.78 201.13 0.46 13.75 90.84 13.75		Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	ssuits	
Corrected for Concentration Dosage at PSD			MeS. na	MeS. ma/m ³	MeS, mg- min/m3	
PSD Location Corrected for locanization at PSD Corrected for locanization at PSD Dosage at PSD Ear 31.86 0.08 2.50 Ear 31.86 0.07 2.18 Chir/Neck 18.50 0.04 1.26 Upper Back/Nape 24.66 0.06 1.69 Abdomen 9.62 0.02 0.66 Middle Back 45.12 0.10 3.08 Ampit (Axillae) 202.18 0.46 1.382 Right Arm, Inner 29.45 0.07 2.01 Left Hand/Glove 3.02 0.07 2.01 Left Hand/Glove 3.95.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.05 27.04 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 20.11 0.46 13.75 Background 1: 89.74 89.74 13.75 Average Background 3: 90.84 13.75			2	Mean Local	Local	
Scalp 36.52 0.08 2.50 Ear 31.86 0.07 2.18 Chir/Neck 18.50 0.04 1.26 Upper Back/Nape 24.66 0.06 1.69 Abdomen 9.62 0.02 0.66 Middle Back 45.12 0.10 3.08 Ampit (Axillae) 202.18 0.46 13.82 Right Arm, Outer 3.02 0.01 0.21 Rit. Forearm, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Shin 26.09 0.06 1.78 Background 1: 89.74 Background 3: 90.84 Background 3: 90.84 Background 3: 90.84 Average Background 3: 90.84		:	Corrected for	Concentration	Dosage at	PF at PSD
Scalp 36.52 0.08 2.50 Ear 31.86 0.07 2.18 Chir/Neck 18.50 0.04 1.26 Upper Back/Nape 24.66 0.06 1.69 Abdomen 9.62 0.02 0.66 Middle Back 45.12 0.10 3.08 Ampit (Axillae) 202.18 0.46 13.82 Right Arm, Inner 29.45 0.07 2.01 Left Arm, Outer 3.02 0.01 0.21 Rt. Forearm, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 Background 3: 90.84 Awarana Background 3: 90.84	PSD No.	PSD Location	Баскдгоипа	al PSD	2	Location
Ear 31.86 0.07 2.18 Chin/Neck 18.50 0.04 1.26 Upper Back/Nape 24.66 0.06 1.69 Abdomen 9.62 0.02 0.66 Middle Back 45.12 0.10 3.08 Armpit (Axillae) 202.18 0.46 13.82 Right Arm, Inner 29.45 0.07 2.01 Left Hand/Glove 3.02 0.07 2.01 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.05 0.69 Crotch 65.41 0.15 4.47 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 2: 91.42 13.75 Average Background 3: 90.84 13.75	-	Scalp	36.52	0.08	2.50	681
Chir/Neck 18.50 0.04 1.26 Upper Back/Nape 24.66 0.06 1.69 Abdomen 9.62 0.02 0.66 Middle Back 45.12 0.10 3.08 Armpit (Axillae) 202.18 0.46 13.82 Right Arm, Inner 29.45 0.07 2.01 Left Arm, Outer 3.02 0.01 0.21 Rt. Forearm, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Thigh 207.73 0.46 17.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 89.74 13.75 Background 3: 91.42 91.42 91.42	2	Ear	31.86	0.07	2.18	781
Upper Back/Nape 24.66 0.06 1.69 Abdomen 9.62 0.02 0.66 Middle Back 45.12 0.10 3.08 Armpit (Axillae) 202.18 0.46 13.82 Right Am, Inner 29.45 0.07 2.01 Left Arm, Outer 3.02 0.01 0.21 Rt. Foream, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Thigh 207.73 0.46 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 2: 91.42 80.84 13.75	က	Chin/Neck	18.50	0.04	1.26	1345
Abdomen 9.62 0.02 0.66 Middle Back 45.12 0.10 3.08 Armpit (Axillae) 202.18 0.46 13.82 Right Arm, Inner 29.45 0.07 2.01 Left Arm, Outer 3.02 0.01 0.21 Rt. Forearm, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 Background 3: 90.84 Average Background 3: 90.84	4	Upper Back/Nape	24.66	90:0	1.69	1009
Middle Back 45.12 0.10 3.08 Armpit (Axillae) 202.18 0.46 13.82 Right Arm, Inner 29.45 0.07 2.01 Left Arm, Outer 3.02 0.01 0.21 Rt. Forearm, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Thigh 207.73 0.46 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 89.74 13.75 Background 3: 90.84 90.84	2	Abdomen	9.62	0.02	99.0	2586
Ampit (Axillae) 202.18 0.46 13.82 Right Amr, Inner 3.02 0.07 2.01 Left Arm, Outer 3.02 0.01 0.21 Rt. Foream, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Shin 207.73 0.47 14.20 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 Background 3: 90.84 Average Background 3: 90.84	9	Middle Back	45.12	0.10	3.08	552
Right Arm, Inner 29.45 0.07 2.01 Left Arm, Outer 3.02 0.01 0.21 Rt. Forearm, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Thigh 207.73 0.47 14.20 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 89.74 Background 3: 90.84 90.84	7	Armpit (Axillae)	202.18	0.46	13.82	123
Left Arm, Outer 3:02 0.01 0.21 Rt. Foream, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Shin 207.73 0.47 14.20 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 Background 3: 90.84 Average Background 3: 90.84	80	Right Arm, Inner	29.45	0.07	2.01	845
Ht. Forearm, Inner 17.14 0.04 1.17 Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Thigh 207.73 0.47 14.20 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 Background 3: 90.84 Average Background 3: 90.84	6	Left Arm, Outer	3.02	0.01	0.21	8232
Left Hand/Glove 395.57 0.90 27.04 Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Thigh 207.73 0.47 14.20 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 89.74 88ckground 3: 90.84 Background 3: 90.84 90.84 90.87 90.87	9	Rt. Foream, Inner	17.14	0.04	1.17	1452
Lower Back 4.04 0.01 0.28 Groin 10.04 0.02 0.69 Crotch 65.41 0.15 4.47 Inner Left Thigh 207.73 0.47 14.20 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 89.74 13.75 Background 3: 90.84 90.84 90.84	=	Left Hand/Glove	395.57	0.90	27.04	83
Groin 10.04 0.02 0.69 Crotch Inner Left Thigh 207.73 0.47 4.47 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 89.74 Background 3: 90.84 90.84 Average Background 3: 90.87	12	Lower Back	4.04	0.01	0.28	6155
Crotch 65.41 0.15 4.47 Inner Left Thigh 207.73 0.47 14.20 Inner Left Shin 26.09 0.06 1.78 Left Foot/Boot 201.13 0.46 13.75 Background 1: 89.74 Background 3: 90.84 Average Background 3: 90.84 Average Background 3: 90.84	13	Groin	10.04	0.05	0.69	2478
Inner Left Thigh 207.73 0.47 14.20 1.78 1.78 1.78 1.78 1.78 1.78 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75	4	Crotch	65.41	0.15	4.47	380
Inner Left Shin 26.09 0.06 1.78	15	Inner Left Thigh	207.73	0.47	14.20	120
Left Foot/Boot	91	Inner Left Shin	56.09	90:0	1.78	954
_]	11	Left Foot/Boot	201.13	0.46	13.75	124
		Background 1:				
		Background 2:				
		Background 3:				
		Average Background:	29.06			

		Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	esults	
			MeS, ng	MeS, mg/m³	MeS, mg- min/m3	
				Mean Local	Local	
			Corrected for	Concentration	Dosage at	PF at PSD
	PSD No.	PSD Location	Background	at PSD	PSD	Location
	ļ	Scalp	55.24	0.13	3.78	453
	. 2	Ear	67.02	0.15	4.58	373
	က	Chin/Neck	60.49	0.14	4.13	414
-	4	Upper Back/Nape	25.38	90.0	1.74	986
	5	Abdomen	40.36	0.00	2.76	620
	9	Middle Back	69.07	0.16	4.72	362
	7	Armpit (Axillae)	2.59	0.01	0.18	9647
	80	Right Arm, Inner	48.03	0.11	3.28	521
	6	Left Arm, Outer	47.07	0.11	3.22	531
	10	Rt. Forearm, Inner	132.44	0:30	9.05	189
	=	Left Hand/Glove	73.77	0.17	5.04	339
	12	Lower Back	31.58	0.07	2.16	792
	13	Groin	41.60	0.09	2.84	601
	14	Crotch	19.82	0.05	1.35	1262
	15	Inner Left Thigh	62.86	0.14	4.30	398
	16	Inner Left Shin	371.45	0.85	25.39	29
	11	Left Foot/Boot	334.39	0.76	22.86	75
			i i			
		Background 1:	89.74			
		Background 2:	91.42			
		Background 3:	90.84			
		Average Background:	90.67			

Section 1 - Summary of Results	ary of Results		
Date of Test:	31-Mar-98		
Suit No.	=		
Size:			
Test Participant:	Identify Subj.		
Configuration:	Mark IV		
Duration of Test, min:	99		
Mean Agent Challenge, mg/m ³ :	27.00		
Overall PF:	386		
MRED (HD), Body Region:	49219	Scrotum	
Systemic MRED (VX), Headache:	3861		
Systemic MRED (VX), Nausea:	9652		
Exposure Dosage, mg-min/m ³ :	1710		

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3586
Background Level, ng:	29.67
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

Section 1 - Summary of Results	ary of Results]
Date of Test:	31-Mar-98		
Suit No.	2 :		8
Size:	M Idontify Cubi		
rest Participarit. Configuration:	Mark IV		
Duration of Test, min:	30		
Mean Agent Challenge, mg/m³:	57.00		
Overall PF: MRED (HD), Body Region:	292 36818	Scrotum	
Systemic MRED (VX), Headache:	2922		
Systemic MRED (VX), Nausea:	7304		
Exposure Dosage, mg-min/m ³ :	1710		

	More and Notes
Sampler Flow Rate, cm ³ /min 14	14.63
	96.9
ıtion:	0.016
	3586
	29:06
	34.8065
Peak	0.00
	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	saults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Loca	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	54.91	0.13	3.75	456
8	Ear	61.88	0.14	4.23	\$
က	Chin/Neck	25.92	90.0	1.77	965
4	Upper Back/Nape	116.30	0.26	7.95	215
လ	Abdomen	83.19	0.19	5.69	301
9	Middle Back	28.90	0.0	1.98	998
7	Armpit (Axillae)	35.81	0.08	2.45	669
œ	Right Arm, Inner	41.71	0.10	2.85	8
6	Left Arm, Outer	112.92	0.26	7.72	222
9	Rt. Forearm, Inner	31.40	0.07	2.15	197
=	Left Hand/Glove	138.81	0.32	9.49	2
12	Lower Back	31.71	0.07	2.17	789
5	Groin	34.70	0.08	2.37	721
4	Crotch	5.45	0.01	0.37	4588
15	Inner Left Thigh	28.80	0.07	1.97	869
9	Inner Left Shin	679.49	1.55	46.45	37
17	Left Foot/Boot	269.08	0.61	18.39	8
	Background 1:	89.74			
	Background 2:	91.42			
	Background 3:	90.84			
	Average Background:	29'06			

MeS, mg/m³ MeS, mg/m³ MeS, mg/m³ MeS, mg/m³ Mes, mg/m³ Mesn Local Local	Scalp Ear Chin/ Uppe Abdo Middli Middli Middli Ampl Right Left H Lowe Groin Crotcl Inner Inner Inner	-	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	sults	
MeS, ng MeS, mg/m³ min/m³ PSD Location Background at PSD PSD Scalp 35.54 0.08 2.43 Ear 13.02 0.03 0.89 Chir/Neck 40.95 0.09 2.80 Upper Back/Nape 50.21 0.11 3.43 Abdomen 38.14 0.09 2.61 Middle Back 63.56 0.14 4.34 Armpit (Axillae) 51.46 0.12 3.52 Right Arm, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Forearm, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Crotch 35.77 0.08 2.44 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 2: 56.67 65.07 34.19 Average Background: 63.81	MeS, ng Scalp Ear Chir/Neck Upper Back/Nape Right Arm, Inner Left Arm, Outer Rt. Forearm, Inner Left Hand/Glove Crotch Inner Left Shin Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81					MeS, mg-	
PSD Location Mean Local Dosage at PSD Background at PSD PSD PSD PSD Chir/Neck Corrected for Concentration at PSD PSD PSD PSD PSD Chir/Neck Location PSD Chir/Neck A0.95 0.09 2.80 0.09 2.80 0.01 38.14 0.09 2.61 0.11 3.43 Abdomen 38.14 0.09 2.61 0.11 3.43 Amplit (Axillae) 55.20 0.13 3.84 Left Arm, Inner A5.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.08 2.44 Inner Left Thigh 82.17 0.09 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Average Background 1: 69.70 Background 3: 56.65 Backg	Scalp 35.54 Ear 13.02 Chir/Neck 40.95 Upper Back/Nape 50.21 Abdomen 38.14 Middle Back 63.56 Ampit (Axillae) 51.46 Right Arm, Outer 37.09 Rt. Forearm, Inner 45.91 Left Hand/Glove 68.61 Groin 35.77 Inner Left Shin 35.77			MeS, ng	MeS, mg/m ³	min/m ³	
PSD Location Corrected for Scalp Concentration at PSD Dosage at PSD Scalp 35.54 0.08 2.43 Ear 13.02 0.03 0.89 Chin/Neck 40.95 0.09 2.80 Upper Back/Nape 50.21 0.11 3.43 Abdomen 38.14 0.09 2.61 Middle Back 63.56 0.14 4.34 Amplt (Axillae) 51.46 0.12 3.52 Right Am, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Forearm, Inner 45.91 0.10 3.14 Left Arm, Outer 37.09 0.08 2.53 Croteh 48.13 0.11 3.29 Groin 35.77 0.08 2.44 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 2: 65.07 3.81 34.19 Average Background	Scalp Scalp Ear Chir/Neck Upper Back/Nape Right Am, Inner Left Hand/Glove Crotch Inner Left Shin Background 1: Background 2: Background 35.54 63.56 63.56 Ampit (Axillae) Right Am, Inner Left Arm, Outer 17.74 Left Hand/Glove Crotch Background 1: Background 2: Background 3: 56.20 48.13 60.19 Left Foot/Boot Background 3: 69.70 Background 3: 65.07				Mean Local	Local	
PSD Location Background at PSD PSD Scalp 35.54 0.08 2.43 Ear 13.02 0.09 2.80 Chin/Neck 40.95 0.09 2.80 Upper Back/Nape 50.21 0.11 3.43 Abdomen 38.14 0.09 2.61 Middle Back 63.56 0.14 4.34 Amplt (Axillae) 51.46 0.12 3.52 Right Am, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Forearm, Inner 45.91 0.10 3.14 Left Arm, Outer 37.09 0.08 2.53 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 2: 65.07 34.19 <td>Scalp 35.54 Ear 13.02 Chir/Neck 40.95 Upper Back/Nape 50.21 Abdomen 38.14 Middle Back 63.56 Ampit (Axillae) 51.46 Right Am, Inner 56.20 Left Arm, Outer 37.09 Rt. Forearm, Inner 45.91 Left Hand/Glove 68.61 Groin 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81</td> <td></td> <td></td> <td>Corrected for</td> <td>Concentration</td> <td>Dosage at</td> <td>PF at PSD</td>	Scalp 35.54 Ear 13.02 Chir/Neck 40.95 Upper Back/Nape 50.21 Abdomen 38.14 Middle Back 63.56 Ampit (Axillae) 51.46 Right Am, Inner 56.20 Left Arm, Outer 37.09 Rt. Forearm, Inner 45.91 Left Hand/Glove 68.61 Groin 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81			Corrected for	Concentration	Dosage at	PF at PSD
Scalp 35.54 0.08 2.43 Ear 13.02 0.09 2.80 Upper Back/Nape 50.21 0.11 3.43 Abdomen 38.14 0.09 2.81 Abdomen 38.14 0.09 2.61 Middle Back 63.56 0.14 4.34 Ampit (Axillae) 51.46 0.12 3.52 Right Am, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Foream, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Groth 35.77 0.08 2.44 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 8.05 Background 2: 65.07 34.19	Scalp Ear Chir/Neck Upper Back/Nape Abdomen Middle Back Right Am, Inner Left Am, Outer Rt. Foream, Inner Left Hand/Glove Crotch Inner Left Thigh Inner Left Shin Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.54 A0.95 Average Background: 63.54 A0.95 Average Background 3: 56.66 Average Background: 63.81	PSD No.	PSD Location	Background	at PSD	PSD	Location
Ear 13.02 0.03 0.89 Chin/Neck 40.95 0.09 2.80 Upper Back/Nape 50.21 0.11 3.43 Abdomen 38.14 0.09 2.61 Middle Back 63.56 0.14 4.34 Amplt (Axillae) 51.46 0.12 3.52 Right Am, Inner 56.20 0.13 3.84 Left Am, Outer 37.09 0.08 2.53 Rt. Foream, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 Background 3: 56.65 Background: 63.67 34.19	Ear 13.02 Chin/Neck 40.95 Upper Back/Nape 50.21 Abdomen 38.14 Middle Back 63.56 Ampit (Axillae) 51.46 Right Am, Inner 56.20 Left Arm, Outer 37.09 Rt. Foream, Inner 45.91 Left Hand/Glove 117.74 Lower Back 68.61 Groin 48.13 Crotch 35.77 Inner Left Thigh 310.19 Left Foot/Boot 500.19 Left Foot/Boot 65.07 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	-	Scalp	35.54	90:0	2.43	707
Chir/Neck 40.95 0.09 2.80 Upper Back/Nape 50.21 0.11 3.43 Abdomen 38.14 0.09 2.61 Middle Back 63.56 0.14 4.34 Ampit (Axillae) 51.46 0.12 3.52 Right Am, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Foream, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Shin 310.19 0.71 21.20 Left Foot/Back 65.07 1.14 34.19 Background 1: 69.70 Background: 63.66 Average Background: 63.81 34.19	Chin/Neck 40.95 Upper Back/Nape 50.21 Abdomen 38.14 Middle Back 63.56 Ampit (Axillae) 51.46 Right Am, Inner 56.20 Left Arm, Outer 37.09 Rt. Foream, Inner 45.91 Left Hand/Glove 68.61 Groin 48.13 Crotch 35.77 Inner Left Thigh 310.19 Left Foot/Boot 500.19 Left Foot/Boot 69.70 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66	7	Ear	13.02	0.03	0.89	1929
Upper Back/Nape 50.21 0.11 3.43 Abdomen 38.14 0.09 2.61 Middle Back 63.56 0.14 4.34 Armpit (Axillae) 51.46 0.12 3.52 Right Arm, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Forearm, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 Background 3.56.66 65.07 Average Background: 63.81 33.11	Upper Back/Nape 50.21 Abdomen 38.14 Middle Back 63.56 Armpit (Axillae) 51.46 Right Arm, Inner 56.20 Left Arm, Outer 37.09 Rt. Forearm, Inner 45.91 Left Hand/Glove 117.74 Lower Back 68.61 Groin 48.13 Crotch 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	က	Chin/Neck	40.95	0.00	2.80	613
Abdomen 38.14 0.09 2.61 Middle Back 63.56 0.14 4.34 Armpit (Axillae) 51.46 0.12 3.52 Right Am, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Foream, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66	Abdomen Middle Back Armpit (Axillae) Right Arm, Inner Left Arm, Outer Rt. Forearm, Inner Left Hand/Glove Crotch Inner Left Thigh Inner Left Shin Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	4	Upper Back/Nape	50.21	0.11	3.43	200
Middle Back 63.56 0.14 4.34 Ampit (Axillae) 51.46 0.12 3.52 Right Am, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Forearm, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Groth 35.77 0.08 2.44 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 Background 3: 56.66 Average Background: 63.81 Average Background: 63.81	Middle Back 63.56 Ampit (Axillae) 51.46 Right Am, Inner 37.09 Rt. Foream, Inner 45.91 Left Hand/Glove 117.74 Lower Back 68.61 Groin 48.13 Crotch 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 3: 56.66 Average Background: 63.81	വ	Abdomen	38.14	0.09	2.61	629
Armpit (Axillae) 51.46 0.12 3.52 Right Am, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Foream, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Bact 500.19 1.14 34.19 Background 1: 69.70 Background 3: 56.66 Average Background: 63.81 Average Background: 63.81	Ampit (Axillae) 51.46 Right Am, Inner 56.20 Left Arm, Outer 37.09 Rt. Foream, Inner 45.91 Left Hand/Glove 68.61 Groin 48.13 Crotch 35.77 Inner Left Thigh 310.19 Left Foot/Boot 500.19 Left Foot/Boot 69.70 Background 1: 69.70 Background 2: 65.07 Average Background: 63.81	9	Middle Back	63.56	0.14	4.34	395
Right Am, Inner 56.20 0.13 3.84 Left Arm, Outer 37.09 0.08 2.53 Rt. Forearm, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 82.66 Background 3: 56.66 Average Background: 63.81	Right Am, Inner 56.20 Left Arm, Outer 37.09 Rt. Foream, Inner 45.91 Left Hand/Glove 117.74 Lower Back Groin 48.13 Crotch 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	7	Ampit (Axillae)	51.46	0.12	3.52	488
Left Arm, Outer 37.09 0.08 2.53 Rt. Forearm, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 69.70 Background 3: 56.66 Average Background: 63.81	Left Arm, Outer 37.09 Rt. Forearm, Inner 45.91 Left Hand/Glove 117.74 Lower Back 68.61 Groin 48.13 Crotch 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66	œ	Right Arm, Inner	56.20	0.13	3.84	447
Rt. Forearm, Inner 45.91 0.10 3.14 Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 69.70 34.19 Background 2: 65.07 65.07 65.07 Background 3: 56.66 63.81	Rt. Forearm, Inner 45.91 Left Hand/Glove 117.74 Lower Back 68.61 Groin 48.13 Crotch 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	6	Left Arm, Outer	37.09	90:0	2.53	229
Left Hand/Glove 117.74 0.27 8.05 Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 Background 2: 65.07 Average Background 3: 56.66	Left Hand/Glove 117.74 Lower Back 68.61 Groin 48.13 Crotch 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	9	Rt. Forearm, Inner	45.91	0.10	3.14	547
Lower Back 68.61 0.16 4.69 Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Thigh Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 34.19 Background 2: 65.07 65.07 Background 3: 56.66 Average Background: 63.81	Lower Back	=	Left Hand/Glove	117.74	0.27	8.05	213
Groin 48.13 0.11 3.29 Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	Groin 48.13 Crotch 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	12	Lower Back	68.61	0.16	4.69	366
Crotch 35.77 0.08 2.44 Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Boot 500.19 1.14 34.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	Crotch 35.77 Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	13	Groin	48.13	0.11	3.29	522
Inner Left Thigh 82.17 0.19 5.62 Inner Left Shin 310.19 0.71 21.20 Left Foot/Baot 500.19 1.14 34.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background 6: 63.81	Inner Left Thigh 82.17 Inner Left Shin 310.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	14	Crotch	35.77	90.0	2.44	702
Inner Left Shin 310.19 0.71 21.20	Left Foot/Boot 500.19 Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	15	Inner Left Thigh	82.17	0.19	5.62	306
Left Foot/Boot	Left Foot/Boot 500.19 Background 1: 69.70 Background 2: 65.07 Background 3: 56.66 Average Background: 63.81	16	Inner Left Shin	310.19	0.71	21.20	8
]]]	17	Left Foot/Boot	500.19	1.14	34.19	20
			Background 1:	69.70			
	11		Background 2:	65.07		:	
			Background 3:	26.66			
			Average Background:	63.81			

Section 1 - Summary of Results	ary of Results	
Date of Test:	2-Apr-98	
Suit No.	<u>5</u> :	
Size: Test Participant:	M Identify Subi.	
Configuration:	Mark IV	
Duration of Test, min:	30	
Mean Agent Challenge, mg/m3:	57.24	
Overall PF:	337	
MRED (HD), Body Region:	27389	Scrotum
Systemic MRED (VX), Headache:	3372	
Systemic MRED (VX), Nausea:	8431	
Exposure Dosage, mg-min/m ³ :	1717	

siculations and Notes	14.63	6.98	0.016	3601	63.81	34.8065	0.00	Below Background Level
Section 2 - Factors, Calculations and Notes	Sampler Flow Rate, cm³/min	Min GC-Detectable Mass, ng:	Min GC-Detectable Concentration:	Maximum Measureable PF:	Background Level, ng:	'Blank Mass'	Avg Non-MS Peak	BBL

Section 1 - Summary of Results	ary of Results	
Date of Test:	2-Apr-98	
Suit No.	4	
Size:	Z	
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	30	
Mean Agent Challenge, mg/m ³ :	57.24	
Overall PF:	218	
MRED (HD), Body Region:	24464	Ears
Systemic MRED (VX), Headache:	2182	
Systemic MRED (VX), Nausea:	5456	
Exposure Dosage, mg-min/m ³ :	1717	

culations and Notes	14.63	6.98	0.016	3601	63.81	34.8065	0.00	Below Background Level	
Section 2 - Factors, Calculations and Notes	Sampler Flow Rate, cm³/min	Min GC-Detectable Mass, ng:	Min GC-Detectable Concentration:	Maximum Measureable PF:	Background Level, ng:	"Blank Mass"	Avg Non-MS Peak	BBL	

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	sults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
	-		Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	32.86	0.07	2.25	765
α.	Ear	168.40	0.38	11.51	149
က	Chin/Neck	37.47	0.0	2.56	670
4	Upper Back/Nape	46.29	0.11	3.16	543
	Abdomen	43.47	0.10	2.97	578
9	Middle Back	41.70	0.10	2.85	602
7	Armpit (Axillae)	37.10	0.08	2.54	229
æ	Right Arm, Inner	49.80	0.11	3.40	504
6	Left Arm, Outer	46.65	0.11	3.19	539
9	Rt. Forearm, Inner	48.14	0.11	3.29	522
=	Left Hand/Glove	97.58	0.22	6.67	257
12	Lower Back	58.76	0.13	4.02	427
5	Groin	34.80	0.08	2.38	722
14	Crotch	35.23	0.08	2.41	713
5	Inner Left Thigh	35.29	0.08	2.41	712
9	Inner Left Shin	966.41	2.20	90.99	92
4	Left Foot/Boot	234.61	0.53	16.04	107
	Background 1:	69.70			
_	Background 2:	65.07		•	
	Background 3:	56.66			
	Average Background:	63.81			
•					

	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	esults	
			6	MeS, mg-	
		MeS, ng	MeS, mg/m³	min/m3	
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	34.30	0.08	2.34	684
5	Ear	53.56	0.13	3.66	438
က	Chin/Neck	50.47	0.12	3.45	465
4	Upper Back/Nape	13.19	0.03	0.00	1777
2	Abdomen	36.01	60:0	2.46	651
9	Middle Back	8.43	0.02	0.58	2781
7	Armpit (Axillae)	13.05	0.03	0.89	1797
&	Right Arm, Inner	54.37	0.13	3.72	431
6	Left Arm, Outer	39.16	0.10	2.68	299
10	Rt. Forearm, Inner	50.43	0.12	3.45	465
=	Left Hand/Glove	82.58	0.21	5.82	274
12	Lower Back	59.38	0.14	4.06	395
<u>e</u>	Groin	45.99	0.11	3.14	510
14	Crotch	45.39	0.11	3.10	517
5	Inner Left Thigh	94.26	0.23	6.44	249
16	Inner Left Shin	229.06	0.56	15.66	102
17	Left Foot/Boot	290.69	0.71	19.87	8
	Background 1:	69.70			
	Background 2:	65.07			
	Background 3:	56.66			
	Average Background:	63.81			

Section 1 - Summary of Results	ry of Results	
Date of Test:	2-Apr-98	
Sult No. Size: Test Participant: Configuration: Duration of Test, min: Mean Agent Challenge, mg/m³: Overall PF: MRED (HD), Body Region: Systemic MRED (VX), Headache: Systemic MRED (VX), Nausea: Exposure Dosage, mg-min/m³:	15 L Identify Subj. Mark IV 28 57.24 379 20145 3786 9464	Scrotum

Section 2 - Factors, Calculations and Notes	14.63	6.98	on: 0.017	3361	63.81	34.8065	0.00	Below Background Level	
Section 2 - Factors	Sampler Flow Rate, cm³/min	Min GC-Detectable Mass, ng:	Min GC-Detectable Concentration:	Maximum Measureable PF:	Background Level, ng:	'Blank Mass'	Avg Non-MS Peak	BBL	

and Re	,	ng/m³	Loca	Iration	SD	8	೮	90.0)7	0.07	90.0		1	0.12	0.19	0.52	0.10	0.09	90.0	0.30	0.51	.14		
ulations			Mean Local	or Concentration	at PSD	0.08	0.03	õ	0.07	õ	ö	ö	0	0	Ö	Ö	o	õ	õ	Ö	ö	-		
Data, Calc		MeS, ng		Corrected for	Background	32.03	12.53	22.62	29.16	28.62	25.39	85.14	70.13	48.41	79.85	211.53	40.18	36.19	32.11	123.31	207.60	467.15		
Section 3 - PSD Data, Calculations and Res					PSD Location	Scalp	Ear	Chin/Neck	Upper Back/Nape	Abdomen	Middle Back	Ampit (Axillae)	Right Arm, Inner	Left Arm, Outer	Rt. Forearm, Inner	Left Hand/Glove	Lower Back	Groin	Crotch	Inner Left Thigh	Inner Left Shin	Left Foot/Boot		
					PSD No.	-	8	က	4	2	9	7	œ	o	9	=	12	5	14	15	16	17		
																3								
				-			-					Scrotum		***			Notes							
Section 1 - Summary of Results		2-Apr-98			. 16	∑	Identify Subj.	Mark IV	28	57.24	351	G)	3505	8763	1602.72		Section 2 - Factors, Calculations and Notes	14.63	6.98	0.017	3361	63.81	34.8065	

819 924 275 334 484 294 111 111 584 648 730 190 113

1.96 1.74 5.82 4.79 3.31 5.46

14.46 2.75

2.47 2.19 8.43

65.07 56.66 63.81

Background 1: Background 2: Background 3: Average Background:

Below Background Level

PF at PSD Location

Dosage at PSD

Local

MeS, mgmin/m3

s and Results

1037 804

Avg Non-MS Peak BBL

MeS, mg Mes Mindma Mes Mes Mindma Mes Mes Mindma	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	esults		
MeS, ng MeS, mg/m³ min/m³ PSD Location Corrected for Concentration at PSD PSD Scalp 64.75 0.15 4.43 Ear 66.37 0.15 4.43 Ear 66.37 0.15 4.43 Chir/Neck 51.66 0.12 3.53 Upper Back/Nape 85.11 0.19 5.82 Abdomen 63.91 0.15 4.37 Middle Back 18.80 0.04 1.29 Ampit (Axillae) 4.89 0.01 2.84 Right Arm, Inner 24.40 0.06 1.67 Left Arm, Outer 41.50 0.09 2.84 Rt. Forearm, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Shin 255.50 0.58 17.46					MeS, mg-	
Scalp Corrected for Scalp Concentration at PSD Local PSD Scalp 64.75 0.15 4.43 Ear 66.37 0.15 4.43 Chir/Neck 51.66 0.12 3.53 Upper Back/Nape 85.11 0.19 5.82 Abdomen 63.91 0.15 4.37 Middle Back 18.80 0.04 1.29 Ampit (Axillae) 4.89 0.01 0.33 Right Arm, Inner 24.40 0.06 1.67 Left Arm, Outer 24.40 0.06 1.67 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.74 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 2: 142.18 8abackground: 139.75			MeS, ng	MeS, mg/m ³	min/m ³	
PSD Location Corrected for Eackground at PSD				Mean Local	Local	
PSD Location Background at PSD PSD Scalp 64.75 0.15 4.43 Ear 66.37 0.15 4.43 Ear 66.37 0.15 4.54 Chir/Neck 51.66 0.12 3.53 Upper Back/Nape 85.11 0.19 5.82 Abdomen 63.91 0.15 4.37 Middle Back 18.80 0.04 1.29 Ampit (Axillae) 4.89 0.01 0.33 Right Arm, Inner 24.40 0.06 1.67 Left Arm, Outer 24.40 0.06 1.67 Left Arm, Outer 24.40 0.06 1.67 Cover Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.23 6.97 Inner Left Thigh 162.01 0.58 17.46 Left Foot/Boot 142.18 8ackground 2: 142.18 8ackground 3: 125.50 Background 3: 125.50 125.50			Corrected for	Concentration	Dosage at	PF at PSD
Scalp 64.75 0.15 4.43 Ear 66.37 0.15 4.43 Chin/Neck 51.66 0.12 3.53 Upper Back/Nape 85.11 0.19 5.82 Abdomen 63.91 0.19 5.82 Abdomen 63.91 0.19 5.82 Ampit (Axillae) 4.89 0.01 0.33 Right Am, Inner 24.40 0.02 2.84 Rt. Foream, Inner 24.40 0.09 2.84 Rt. Foream, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Shin 255.50 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Background 1: 151.56 8ackground 3: 125.50 Background 3: 125.50 0.81 24.42 Average Background 3: 125.50 0.81	PSD No.	PSD Location	Background	at PSD	PSD	Location
Ear 66.37 0.15 4.54 Chin/Neck 51.66 0.12 3.53 Upper Back/Nape 85.11 0.19 5.82 Abdomen 63.91 0.15 4.37 Middle Back 18.80 0.04 1.29 Ampit (Axillae) 4.89 0.01 0.33 Right Am, Inner 24.40 0.09 2.84 Right Am, Outer 24.40 0.09 2.84 Rt. Foream, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.29 8.69 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 142.18 8 6.97 Background 1: 151.56 8 6.97 Background 3: 125.50	-	Scalp	64.75	0.15	4.43	331
Chir/Neck 51.66 0.12 3.53 Upper Back/Nape 85.11 0.19 5.82 Abdomen 63.91 0.15 4.37 Middle Back 18.80 0.04 1.29 Ampit (Axillae) 4.89 0.01 0.33 Right Arm, Inner 95.55 0.22 6.53 Left Arm, Outer 24.40 0.09 2.84 Rt. Foream, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Background 1: 151.56 Background 3: 125.50 Background 3: 125.50 Average Background 3: 125.50	8	Ear	66.37	0.15	4.54	322
Upper Back/Nape 85.11 0.19 5.82 Abdomen 63.91 0.15 4.37 Middle Back 18.80 0.04 1.29 Armpit (Axillae) 4.89 0.01 0.33 Right Am, Inner 95.55 0.22 6.53 Left Arm, Outer 41.50 0.09 2.84 Rt. Foream, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 8assackground 3: 125.50 Average Background: 139.75 440	က	Chin/Neck	51.66	0.12	3.53	414
Abdomen 63.91 0.15 4.37 Middle Back 18.80 0.04 1.29 Ampli (Axillae) 4.89 0.01 0.33 Right Am, Inner 95.55 0.22 6.53 Left Arm, Outer 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	4	Upper Back/Nape	85.11	0.19	5.82	251
Middle Back 18.80 0.04 1.29 Ampit (Axillae) 4.89 0.01 0.33 Right Am, Inner 95.55 0.22 6.53 Left Arm, Outer 24.40 0.09 2.84 Rt. Foream, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.29 8.69 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75 139.75	2	Abdomen	63.91	0.15	4.37	335
Ampit (Axillae) 4.89 0.01 0.33 Right Am, Inner 95.55 0.22 6.53 Left Arm, Outer 41.50 0.09 2.84 Rt. Foream, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 8ackground 3: 125.50 Background 3: 125.50 Average Background: 139.75	9	Middle Back	18.80	0.04	1.29	1138
Right Arm, Inner 95.55 0.22 6.53 Left Arm, Outer 41.50 0.09 2.84 Rt. Forearm, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 8ackground 3: 125.50 Average Background: 139.75 39.75	7	Armpit (Axillae)	4.89	0.01	0.33	4374
Left Arm, Outer 41.50 0.09 2.84 Rt. Forearm, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 2: 142.18 Background 3: 125.50 Average Background: 139.75	œ	Right Arm, Inner	95.55	0.22	6.53	224
Rt. Forearm, Inner 24.40 0.06 1.67 Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 8ackground 3: 125.50 Average Background: 139.75 139.75	6	Left Arm, Outer	41.50	0.09	2.84	516
Left Hand/Glove 52.68 0.12 3.60 Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 8ackground 3: 125.50 Average Background: 139.75 139.75	9	Rt. Foream, Inner	24.40	90.0	1.67	877
Lower Back 98.57 0.22 6.74 Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 8ackground 2: 142.18 Background 3: 125.50 Average Background: 139.75	=	Left Hand/Glove	52.68	0.12	3.60	406
Groin 64.40 0.15 4.40 Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	12	Lower Back	98.57	0.22	6.74	217
Crotch 127.16 0.29 8.69 Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	13	Groin	64.40	0.15	4.40	332
Inner Left Thigh 102.01 0.23 6.97 Inner Left Shin 255.50 0.58 17.46 Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 42.18 Background 2: 142.18 42.18 Average Background: 139.75	4	Crotch	127.16	0.29	8.69	168
Inner Left Shin 255.50 0.58 17.46 257.21 0.81 24.42 24	15	Inner Left Thigh	102.01	0.23	6.97	210
Left Foot/Boot 357.21 0.81 24.42 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	91	Inner Left Shin	255.50	0.58	17.46	8
11	17	Left Foot/Boot	357.21	0.81	24.42	99
		Background 1:	151.56			
		Background 2:	142.18			
		Background 3:	125.50			
		Average Background:	139.75			

	Section 1 - Summary of Results	
Date of Test:	7-Apr-98	
Suit No. Size: Test Participant: Configuration: Duration of Test, min: Mean Agent Challenge, mg/m³: Overall PF: MRED (HD), Body Region: Systemic MRED (VX), Headache:	17 L Identify Subj. Mark IV 30 48.77 248 6565 6265	Scrotum
Exposure Dosage, mg-min/m ³ :	1463	
Section 2 - Factors, Calculations and Notes	ulations and	Notes
Sampler Flow Rate, cm³/min Min GC-Detectable Mass. ng:	14.63 6.98	
Min GC-Detectable Concentration:	0.016	
Maximum Measureable PF: Background Level, ng: 'Blank Mass' Avg Non-MS Peak BBL	3068 139.75 34.8065 0.00 Below Background Level	und Level

Section 1 - S	Section 1 - Summary of Results	
Date of Test:	7-Apr-98	
Suit No.	18	
Size:	×	
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	30	
Mean Agent Challenge, mg/m3:	: 48.77	
Overall PF:	244	
MRED (HD), Body Region:	17176	Scrotum
Systemic MRED (VX), Headache:	he: 2444	
Systemic MRED (VX), Nausea:	6110	
Exposure Dosage, mg-min/m3.	1463	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3068
Background Level, ng:	139.75
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
BBĽ	Below Background Level
•	

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	esults	
				MeS, mg-	
		MeS, ng	MeS, mg/m³		
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	93.96	0.19	5.74	255
2	Ear	167.63	0.38	11.46	128
က	Chin/Neck	20.66	0.23	6.77	216
4	Upper Back/Nape	170.47	0.39	11.65	126
2	Abdomen	95.83	0.22	6.55	223
ဟ	Middle Back	55.61	0.13	3.80	382
7	Armpit (Axillae)	57.05	0.13	3.90	375
∞	Right Arm, Inner	72.65	0.17	4.97	292
6	Left Arm, Outer	100.29	0.23	98.9	213
9	Rt. Forearm, Inner	208.63	0.48	14.26	103
=	Left Hand/Glove	163.37	0.37	11.17	131
12	Lower Back	75.93	0.17	5.19	282
<u>6</u>	Groin	43.98	0.10	3.01	487
7	Crotch	48.60	0.11	3.35	440
स्	Inner Left Thigh	47.50	0.11	3.25	451
9	Inner Left Shin	217.21	0.49	14.85	66
17	Left Foot/Boot	205.16	0.47	14.02	40
	Background 1:	151.56			
	Background 2:	142.18			
	Background 3:	125.50			
	Average Background:	139.75			

Section 1 - Summary of Results	nary of Results			Section 3 -
Date of Test:	7-Apr-98			
Suit No.	61		PSD No.	PSD Location
Size:	≥		-	Scalp
Test Participant:	Identify Subj.		2	Ear
Configuration:	Mark IV		က	Chin/Neck
Duration of Test, min:	30		4	Upper Back/Nape
Mean Agent Challenge, mg/m³:	50.53		ß	Abdomen
Overall PF:	200		9	Middle Back
MRED (HD), Body Region:	6988 Scrotum	E	7	Ampit (Axillae)
Systemic MRED (VX), Headache:	2003		80	Right Arm, Inner
Systemic MRED (VX), Nausea:	5008		6	Left Arm, Outer
Exposure Dosage, mg-min/m ³ :	1516		9	Rt. Forearm, Inner

PF at PSD Location

Local Dosage at PSD

Concentration at PSD

Corrected for Background

MeS, mg/m³ Mean Local

MeS, ng

MeS, mgmin/m3

PSD Data, Calculations and Results

459 371 508

> 2.99 3.54 2.90 1.26

0.10

0.10

0.11

0.14

48.28 59.72 43.68 51.74 42.38

429 523

1202

441 409 1981 220 445

3.44 3.71 0.77 6.89

> 0.12 0.03 0.23

50.31 54.28 11.19 303 589

3.40 5.00 2.58 8.46 3.10

0.11 0.09 0.28 0.10 1.41

49.80

Left Hand/Glove

73.14 37.67

Lower Back

123.76

Inner Left Thigh Inner Left Shin Left Foot/Boot

Groin Crotch 620.93

		=
Section 2 - Factors, Calculations and Notes	ulations and Notes	12
Sampler Flow Rate, cm³/min	14.63	13
Min GC-Detectable Mass, ng:	86.9	4
Min GC-Detectable Concentration:	0.016	15
Maximum Measureable PF:	3179	9
Background Level, ng:	139.75	17
Blank Mass'	34,8065	:
lvg Non-MS Peak	0.00	
3	Below Background Level	

151.56 142.18

Background 1: Background 2:

125.50

Background 3: Average Background:

139.75

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Аp	pei	ndix	В

Section 1 - Summary of Results	ary of Results	
Date of Test:	7-Apr-98	
Suit No.	50	
Size:	တ	
Test Participant:	Identify Subj.	
Configuration:	Mark IV	
Duration of Test, min:	30	
Mean Agent Challenge, mg/m3:	50.53	
Overall PF:	186	
MRED (HD), Body Region:	9454	Scrotum
Systemic MRED (VX), Headache:	1859	
Systemic MRED (VX), Nausea:	4648	
Exposure Dosage, mg-min/m ³ :	1516	

14.63 6 98
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0.016
3179
139.75
34.8065
00:00
Below Background Level
0 × 9 0 ×

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	saults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	,
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	62.08	0.14	4.24	357
~	Ear	21.83	0.05	1.49	1016
က	Chin/Neck	48.30	0.11	3.30	459
4	Upper Back/Nape	70.62	0.16	4.83	314
ß	Abdomen	93.64	0.21	6.40	237
9	Middle Back	58.20	0.13	3.98	381
7	Armpit (Axillae)	32.37	0.07	2.21	982
&	Right Arm, Inner	108.83	0.25	7.44	204
6	Left Arm, Outer	57.98	0.13	3.96	382
9	Rt. Forearm, Inner	151.56	0.35	10.36	146
=	Left Hand/Glove	276.47	0.63	18.90	8
12	Lower Back	162.21	0.37	11.09	137
13	Groin	34.12	0.08	2.33	650
-	Crotch	91.48	0.21	6.25	242
5	Inner Left Thigh	62.32	0.14	4.26	326
16	Inner Left Shin	646.28	1.47	44.18	怒
17	Left Foot/Boot	258.42	0.59	17.66	98
	Background 1:	151.56			
	Background 2:	142.18			
	Background 3:	125.50			
	Average Background:	139.75			

3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		Section 3 - PSL) Data, Calcu	Section 3 - PSD Data, Calculations and Results	esuits	
PSD Location Corrected for Concentration at PSD Corrected for Concentration at PSD Local Dosage at PSD Scalp 29.92 0.07 2.04 Ear 44.89 0.10 3.07 Chin/Neck 19.45 0.04 1.11 Abdomen 29.64 0.07 2.03 Middle Back 39.85 0.09 2.72 Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Inner 63.44 0.14 4.34 Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Crotch 28.20 0.06 1.93 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 2: 72.25 88 1.29			MeS, ng	MeS, mg/m³	MeS, mg- min/m³	
Scalp 29.92 0.07 2.04 Ear 44.89 0.10 3.07 Chin/Neck 19.45 0.04 1.11 Abdomen 29.64 0.07 2.03 Middle Back 39.85 0.09 2.72 Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Inner 63.44 0.14 4.34 Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Inner Left Thigh 18.83 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 88.27 0.20 6.03 Background 2: 72.25 88.27 0.20 6.03			Corrected for	Mean Local Concentration	Local Dosage at	PF at PSD
Scalp 29.92 0.07 2.04 Ear 44.89 0.10 3.07 Chin/Neck 19.45 0.04 1.11 Abdomen 29.64 0.07 2.03 Middle Back 39.85 0.09 2.72 Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Inner 63.44 0.14 4.34 Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 88.27 0.20 6.03 Background 2: 72.25 75.03 Average Background: 75.00 6.03	PSD No.	PSD Location	Background	at PSD	PSD	Location
Ear 44.89 0.10 3.07 Chin/Neck 19.45 0.04 1.33 Upper Back/Nape 16.23 0.04 1.11 Abdomen 29.64 0.07 2.03 Middle Back 39.85 0.09 2.72 Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Inner 63.44 0.14 4.34 Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Inner Left Shin 28.20 0.06 1.93 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 2: 72.25 88.27 0.20 6.03 Average Background: 75.00 6.03 6.03	÷	calp	29.92	0.07	2.04	835
Chin/Neck 19.45 0.04 1.33 Upper Back/Nape 16.23 0.04 1.11 Abdomen 29.64 0.07 2.03 Middle Back 39.85 0.09 2.72 Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Inner 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 2: 72.25 Background 3: 70.35 Average Background: 75.00 75.00		ar	44.89	0.10	3.07	222
Upper Back/Nape 16.23 0.04 1.11 Abdomen 29.64 0.07 2.03 Middle Back 39.85 0.09 2.72 Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Inner 63.44 0.14 4.34 Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Infl Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 82.25 0.05 6.03 Background 2: 72.25 84 75.00 6.03		hin/Neck	19.45	0.04	1.33	1285
Abdomen 29.64 0.07 2.03 Middle Back 39.85 0.09 2.72 Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Outer 78.27 0.18 5.35 Left Arm, Outer 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Crotch 18.89 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 Background 2: 72.25 Background 3: 70.35 Average Background 3: 70.35		pper Back/Nape	16.23	0.04	1.1	1540
Middle Back 39.85 0.09 2.72 Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Inner 63.44 0.14 4.34 Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.30 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 82.41 82.41 Background 2: 72.25 8ackground 3: 70.35		pdomen	29.64	0.07	2.03	843
Armpit (Axillae) 111.13 0.25 7.60 Right Arm, Inner 63.44 0.14 4.34 Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Crotch 28.20 0.06 1.93 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 Background 2: 72.25 Background 3: 70.35 Average Background: 75.00		liddle Back	39.85	0.09	2.72	627
Right Arm, Inner 63.44 0.14 4.34 Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 82.41 82.41 Background 3: 70.35 72.25 Background 3: 70.35 70.35		rmpit (Axillae)	111.13	0.25	7.60	225
Left Arm, Outer 78.27 0.18 5.35 Rt. Forearm, Inner 115.64 0.26 7.90 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Crotch 28.20 0.06 1.93 Inner Left Shin 23.24 0.05 1.59 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 Background 3: 70.35 Average Background 3: 70.35		ight Arm, Inner	63.44	0.14	4.34	394
Rt. Forearm, Inner 115.64 0.26 7.30 Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Crotch 28.20 0.06 1.93 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 82.41 Background 2: 72.25 72.25 Background 3: 70.35 Average Background: 75.00		eft Arm, Outer	78.27	0.18	5.35	319
Left Hand/Glove 108.03 0.25 7.38 Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Crotch 28.20 0.06 1.93 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 82.41 6.03 Background 2: 72.25 72.25 Background 3: 70.35		t. Forearm, Inner	115.64	0.26	7.90	216
Lower Back 29.74 0.07 2.03 Groin 18.89 0.04 1.29 Crotch 28.20 0.06 1.93 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 82.41 6.03 Background 2: 72.25 72.25 Average Background: 70.35		eft Hand/Glove	108.03	0.25	7.38	231
Groin 18.89 0.04 1.29 Crotch 28.20 0.06 1.93 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 6.03 Background 2: 72.25 70.35 Average Background: 75.00		ower Back	29.74	0.07	2.03	840
Crotch 28.20 0.06 1.93 Inner Left Thigh 18.83 0.04 1.29 Inner Left Shin 23.24 0.05 1.59 Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 Background 2: 72.25 Background 3: 70.35 Average Background: 75.00		roin	18.89	0.04	1.29	1323
Inner Left Thigh		rotch	28.20	90:0	1.93	886
Inner Left Shin 23.24 0.05 1.59		ner Left Thigh	18.83	0.04	1.29	1327
Left Foot/Boot 88.27 0.20 6.03 Background 1: 82.41 Background 2: 72.25 Background 3: 70.35 Average Background: 75.00		ner Left Shin	23.24	0.05	1.59	1075
_		off Foot/Boot	88.27	0.20	6.03	583
·	<u></u>	Background 1:	82.41			
		Background 2:	72.25			
		Background 3:	70.35			
	·	Average Background:	75.00			

Section 1 - Summary of Results	nary of Results	
Date of Test:	23-Jun-98	
Suit No.	-	
Size:	봈	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	8	
Mean Agent Challenge, mg/m3:	56.93	
Overall PF:	718	
MRED (HD), Body Region:	34558	Scrotum
Systemic MRED (VX), Headache:	7181	
Systemic MRED (VX), Nausea:	17952	
Exposure Dosage, mg-min/m3:	1708	

	Below Background Level	vg Non-MS Peak 0.00	Section 2 - Factors, Calculations and Notes	14.63 6.98 0.016 3581 75.00 34.8065 0.00	Sampler Flow Rate, cm³/min Min GC-Detectable Mass, ng: Min GC-Detectable Concentration: Maximum Measureable PF: Background Level, ng: "Blank Mass" Avg Non-MS Peak BBL
				34.8065	Blank Mass"
				75.00	ackground Level, ng:
.: U	:Bu	.evel, ng:		3581	faximum Measureable PF:
aable PF: ng:	able PF: ng:	asureable PF: .evel, ng:		0.016	fin GC-Detectable Concentration:
9 Concentration: aable PF: ng:	o Concentration: aable PF: ng:			6.98	fin GC-Detectable Mass, ng:
9 Mass, ng: 9 Concentration: sable PF: ng:	e Mass, ng: e Concentration: eable PF: ng:			14.63	ampler Flow Rate, cm³/min

Section 1 - Summary of Results	nary of Results			
Date of Test:	23-Jun-98		-	
Suit No.	, 2			PSD
Size:	XXL			
Test Participant:	Identify Subj.			
Configuration:	Kappler CPF3			
Duration of Test, min:	30			
Mean Agent Challenge, mg/m3:	56.93			
Overall PF:	605			
MRED (HD), Body Region:	92886	Nape		
Systemic MRED (VX), Headache:	6045			
Systemic MRED (VX), Nausea:	15113			
Exposure Dosage, mg-min/m ³ :	1708			

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3581
Background Level, ng:	75.00
Blank Mass	34.8065
Avg Non-MS Peak	0.00
B8L	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	suits	
		,		MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	48.33	0.11	3.30	217
N	Ear	27.41	90.0	1.87	912
က	Chin/Neck	32.93	90.0	2.25	759
4	Upper Back/Nape	84.68	0.19	5.79	295
က	Abdomen	63.30	0.14	4.33	395
ဖ	Middle Back	38.52	0.09	2.63	649
7	Armpit (Axillae)	120.17	0.27	8.21	208
80	Right Arm, Inner	100.94	0.23	6.90	248
6	Left Arm, Outer	107.52	0.24	7.35	232
9	Rt. Forearm, Inner	0.00	BBL	BB L	3581
Ξ	Left Hand/Glove	75.89	0.17	5.19	329
12	Lower Back	43.01	0.10	2.94	581
1 3	Groin	74.48	0.17	5.09	332
14	Crotch	8.28	0.02	0.57	3019
15	Inner Left Thigh	21.65	0.05	1.48	1154
16	Inner Left Shin	56.78	0.13	3.88	440
11	Left Foot/Boot	5.21	0.01	0.36	4799
	Background 1:	82.41			
	Background 2:	72.25			
	Background 3:	70.35			
	Average Background:	75.00			
			•		

Section 1 - Summary of Results	nary of Results	
Date of Test:	23-Jun-98	
Suit No. Size:	თ _	
Test Participant:	Identify Subj.	
Configuration: Duration of Test, min:	Kappler CPF3 30	
Mean Agent Challenge, mg/m³: Overall PF:	56.04	
MRED (HD), Body Region:	9148	Scrotum
Systemic MRED (VX), neadache: Systemic MRED (VX), Nausea: Exposure Dosage, mg-min/m³:	3605 9013 1681	
	1001	

Section 2 - Factors, Calculations and Notes	iculations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	86.9
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3526
Background Level, ng:	75.00
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
B8L	Below Background Level

	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	esuits	
		MeS, ng	MeS, mg/m³	MeS, mg- min/m3	
			Mean Local	Local	
PSD No.	PSD Location	Corrected for Background	Concentration at PSD	Dosage at PSD	PF at PSD Location
-	Scalp	107.90	0.25	7.38	228
8	Ear	69.17	0.16	4.73	356
က	Chin/Neck	36.22	90:0	2.48	629
4	Upper Back/Nape	34.98	90.0	2.39	703
2	Abdomen	23.22	0.05	1.59	1059
9	Middle Back	22.04	0.05	1.51	1116
7	Armpit (Axillae)	45.95	0.10	3.14	535
æ	Right Arm, Inner	62.53	0.14	4.27	393
O	Left Arm, Outer	123.88	0.28	8.47	199
9	Rt. Forearm, Inner	237.89	0.54	16.26	103
=	Left Hand/Glove	152.42	0.35	10.42	161
52	Lower Back	52.39	0.12	3.58	470
13	Groin	35.17	0.08	2.40	669
4	Crotch	104.86	0.24	7.17	235
15	Inner Left Thigh	51.20	0.12	3.50	480
9	Inner Left Shin	44.04	0.10	3.01	529
17	Left Foot/Boot	35.09	0.08	2.40	701
	,				
	Background 1:	82.41			
	Background 2:	72.25			
	Background 3:	70.35			
	Average Background:	75.00			

Section 1 - Summary of Results	ary of Results	
Date of Test:	23-Jun-98	
Suit No.	4	
Size:	ᅻ	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	93	
Mean Agent Challenge, mg/m³:	56.04	
Overall PF:	549	
MRED (HD), Body Region:	32661	Chin & Neck
Systemic MRED (VX), Headache:	5486	
Systemic MRED (VX), Nausea:	13715	
Exposure Dosage, mg-min/m³:	1681	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3526
Background Level, ng:	75.00
Blank Mass	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	suits	
				MeS, mg-	
		MeS, ng	MeS, mg/m²	min/m3	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	16.96	0.04	1.16	1451
2	Ear	35.71	0.08	2.44	689
က	Chin/Neck	97.15	0.22	6.64	253
4	Upper Back/Nape	35.62	0.08	2.43	691
2	Abdomen	71.02	0.16	4.85	346
9	Middle Back	18.48	0.04	1.26	1331
7	Ampit (Axillae)	42.65	0.10	2.92	277
æ	Right Arm, Inner	39.71	0.00	2.71	619
6	Left Arm, Outer	71.48	0.16	4.89	344
9	Rt. Forearm, Inner	218.69	0.50	14.95	112
=	Left Hand/Glove	82.00	0.19	2.60	300
12	Lower Back	50.33	0.11	3.44	489
13	Groin	53.75	0.12	3.67	458
4	Crotch	22.04	0.05	1.51	1116
15	Inner Left Thigh	24.51	90.0	1.68	1004
16	Inner Left Shin	19.09	0.04	1.30	1289
11	Left Foot/Boot	52.14	0.12	3.56	472
	Background 1:	82.41			
	Background 2:	72.25			
	Background 3:	70.35			
	Average Background:	75.00			

PSD No. PSD Location PSD Location MeS, ng MeS, mg/m anin/m³ min/m³ min/		Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	esuits	
MeS, ng MeS, mg/m³ min/m³ PSD Location Corrected for Concentration at PSD Local Local Local Local Local Local Local Local Angulary Scalp 28.85 0.07 1.97 Ear 26.38 0.06 1.80 Chin/Neck 20.93 0.05 1.43 Upper Back/Nape 47.05 0.11 3.22 Abdomen 35.90 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 276.67 0.06 1.72 Armpit (Axillae) 71.80 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Left Foot/Boot 13.36 0.10 3.00 Background 2:	·				MeS, mg-	
PSD Location Corrected for Background at PSD Mean Local Local Age at PSD Local Dosage at PSD Scalp 28.85 0.07 1.97 Ear 26.38 0.06 1.80 Chin/Neck 20.93 0.05 1.43 Upper Back/Nape 47.05 0.11 3.22 Abdomen 35.90 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 276.67 0.06 1.72 Armpit (Axillae) 71.80 0.14 4.05 Rt. Forearm, Inner 276.67 0.063 18.91 Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.063 18.91 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 2: 65.16 0.03 0.91			MeS, ng	MeS, mg/m ³	min/m ³	
PSD Location Corrected for Scale at PSD Concentration at PSD Dosage at PSD Scalp 28.85 0.07 1.97 Ear 26.38 0.06 1.80 Chin/Neck 20.93 0.05 1.43 Upper Back/Nape 47.05 0.11 3.22 Abdomen 35.90 0.08 2.45 Middle Back 25.16 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 56.25 0.13 3.84 Lower Back 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 2:				Mean Local	Local	
PSD Location Background at PSD PSD Scalp 28.85 0.07 1.97 Ear 26.38 0.06 1.80 Chin/Neck 20.93 0.05 1.43 Upper Back/Nape 47.05 0.11 3.22 Abdomen 35.90 0.08 2.45 Middle Back 25.16 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 56.22 0.13 3.84 Left Arm, Outer 276.67 0.63 18.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 2: 65.16 0.0			Corrected for	Concentration	Dosage at	PF at PSD
Scalp 28.85 0.07 1.97 Ear 26.38 0.06 1.80 Chin/Neck 20.93 0.06 1.80 Chin/Neck 20.93 0.06 1.80 Upper Back/Nape 47.05 0.11 3.22 Abdomen 35.90 0.08 2.45 Middle Back 25.16 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Lower Back 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Foot/Boot 13.36 0.01 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 2: 65.16 0.03	PSD No.	PSD Location	Background	at PSD	PSD	Location
Ear 26.38 0.06 1.80 Chin/Neck 20.93 0.05 1.43 Upper Back/Nape 47.05 0.11 3.22 Abdomen 35.90 0.08 2.45 Middle Back 25.16 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Left Hand/Glove 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 72.33 Average Background 3: 72.33 Average Background 3: 70.83 0.03 0.01	-	Scalp	28.82	0.07	1.97	861
Chin/Neck 20.93 0.05 1.43 Upper Back/Nape 47.05 0.11 3.22 Abdomen 35.90 0.08 2.45 Middle Back 25.16 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 Background 3: 72.33 Average Background 3: 72.33 Average Background: 70.83	7	Ear	26.38	90:0	1.80	941
Upper BackNape 47.05 0.11 3.22 Abdomen 35.90 0.08 2.45 Middle Back 25.16 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 276.67 0.63 18.91 Left Hand/Glove 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 72.33 Average Background: 70.83 77.33	e0	Chin/Neck	20.93	0.05	1.43	1186
Abdomen 35.90 0.08 2.45 Middle Back 25.16 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Lower Back 33.51 0.06 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Shin 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 Background 2: 65.16 Background 3: 72.33 Average Background: 70.83	4	Upper Back/Nape	47.05	0.11	3.22	528
Middle Back 25.16 0.06 1.72 Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 56.22 0.13 3.84 Left Arm, Outer 276.67 0.63 18.91 Left Hand/Glove 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 72.33 Average Background: 70.83 72.33	လ	Abdomen	35.90	90.0	2.45	691
Armpit (Axillae) 70.23 0.16 4.80 Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Lower Back 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 72.33 Average Background 3: 72.33 Average Background: 70.83 70.83 77.83	9	Middle Back	25.16	90.0	1.72	287
Right Arm, Inner 56.22 0.13 3.84 Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Left Hand/Glove 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 72.33 Average Background: 70.83 72.33	7	Armpit (Axilfae)	70.23	0.16	4.80	353
Left Arm, Outer 59.31 0.14 4.05 Rt. Forearm, Inner 276.67 0.63 18.91 Left Hand/Glove 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 2: 65.16 65.16 Background 3: 72.33 Average Background: 70.83	@	Right Arm, Inner	56.22	0.13	3.84	442
Rr. Forearm, Inner 276.67 0.63 18.91 Left Hand/Glove 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 72.33 Average Background 3: 72.33 Average Background: 70.83	တ	Left Arm, Outer	59.31	0.14	4.05	419
Left Hand/Glove 71.80 0.16 4.91 Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 Background 3: 72.33 Average Background: 70.83	9	Rt. Forearm, Inner	276.67	0.63	18.91	06
Lower Back 33.51 0.08 2.29 Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 72.33 Background 3: 72.33 72.33 Average Background: 70.83	=	Left Hand/Glove	71.80	0.16	4.91	346
Groin 50.35 0.11 3.44 Crotch 14.68 0.03 1.00 Inner Left Thigh 23.47 0.05 1.60 Inner Left Shin 43.90 0.10 3.00 Left Foot/Boot 13.36 0.03 0.91 Background 1: 74.99 74.99 8ackground 3: 72.33 Average Background: 70.83 72.33 72.33	12	Lower Back	33.51	90.0	2.29	741
Crotch 14.68 0.03 1.00	13	Groin	50.35	0.11	3.44	493
Inner Left Thigh 23.47 0.05 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.3.6 0.03 0.91 1.3.6 0.03 0.91 1.3.6 1.3.6 0.03 0.91 1.3.6	14	Crotch	14.68	0.03	1.00	1692
Inner Left Shin	15	Inner Left Thigh	23.47	0.05	1.60	1058
Left Foot/Boot	16	Inner Left Shin	43.90	0.10	3.00	266
	17	Left Foot/Boot	13.36	0.03	0.91	1859
		Background 1:	74.99			
		Background 2:	65.16			
		Background 3:	72.33			
		Average Background:	70.83			

Section 1 - Summary of Results	nary of Results	
Date of Test:	25~Jun-98	
Suit No.	гo	
Size:	XX	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	30	
Mean Agent Challenge, mg/m³:	56.56	
Overall PF:	621	
MRED (HD), Body Region:	62969	Scrotum
Systemic MRED (VX), Headache:	6212	
Systemic MRED (VX), Nausea:	15530	
Exposure Dosage, mg-min/m³:	1697	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3558
Background Level, ng:	70.83
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

PSD No. PSD Location PSD Location MeS, mg/m MeS, mg/m MeS, mg/m MeA, mg/m MeA, mg/m MeA, mg/m MeA, mg/m Location MeS, mg/m MeA PFSD Location Sagana Sagana Sagana Sagana Sagana Sagana Sagana PFSD Location Sagana Sagana<		Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	esults	
Corrected for Concentration Concentration			Moe no	Mee malm ³	MeS, mg-	
Scalp Corrected for Concentration at PSD Concentration at PSD Dosage at PSD Scalp 29.45 0.07 2.01 Ear 39.51 0.09 2.70 Chir/Neck 24.82 0.06 1.70 Upper Back/Nape 27.39 0.06 1.70 Abdomen 51.16 0.12 3.50 Ampit (Axillae) 68.75 0.06 1.87 Ampit (Axillae) 68.75 0.16 4.70 Right Arm, Inner 52.22 0.12 3.57 Left Arm, Outer 71.55 0.16 4.89 Rt. Forearm, Inner 22.74 0.06 1.30 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.10 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 2: 65.16 4.62 Background 3: 72.33 4.62 Average Background 3: 72.83 </th <th></th> <th></th> <th>Med, Hy</th> <th>Mean Local</th> <th>Local</th> <th></th>			Med, Hy	Mean Local	Local	
PSD Location Background at PSD PSD Scalp 29.45 0.07 2.01 Ear 39.51 0.09 2.70 Chir/Neck 24.82 0.06 1.70 Upper Back/Nape 27.39 0.06 1.87 Abdomen 51.16 0.12 3.50 Middle Back 39.27 0.09 2.68 Armpit (Axillae) 68.75 0.16 4.70 Right Arm, Inner 52.22 0.15 4.70 Right Arm, Outer 71.55 0.16 4.89 Rt. Forearm, Inner 84.22 0.19 5.76 Left Hand/Glove 84.36 0.19 5.76 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.10 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 2: 65.16 4.62 Background 3: 72.33 7.33 <			Corrected for	Concentration	Dosage at	PF at PSD
Scalp 29.45 0.07 2.01 Ear 39.51 0.09 2.70 Chir/Neck 24.82 0.06 1.70 Upper Back/Nape 27.39 0.06 1.87 Abdomen 51.16 0.12 3.50 Middle Back 39.27 0.09 2.68 Amplt (Axillae) 68.75 0.16 4.70 Right Am, Inner 52.22 0.15 4.70 Right Am, Inner 71.55 0.16 4.89 Rt. Foream, Inner 84.22 0.19 5.76 Left Hand/Glove 84.36 0.19 5.76 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.10 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 2: 65.16 4.62 Background 3: 72.33 4.62	PSD No.	PSD Location	Background	at PSD	PSD	Location
Ear 39.51 0.09 2.70 Chin/Neck 24.82 0.06 1.70 Upper Back/Nape 27.39 0.06 1.87 Abdomen 51.16 0.12 3.50 Middle Back 39.27 0.09 2.68 Armpit (Axillae) 68.75 0.16 4.70 Right Arm, Inner 52.22 0.12 3.57 Left Arm, Outer 71.55 0.16 4.89 Rt. Forearm, Inner 84.22 0.19 5.76 Left Hand/Glove 84.36 0.19 5.76 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Shin 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 2: 65.16 4.62 Background 3: 72.33 70.33 Average Background: 70.83	_	Scalp	29.45	0.07	2.01	843
Chir/Neck 24.82 0.06 1.70 Upper Back/Nape 27.39 0.06 1.87 Abdomen 51.16 0.12 3.50 Middle Back 39.27 0.09 2.68 Ampit (Axillae) 68.75 0.16 4.70 Right Am, Inner 52.22 0.12 3.57 Left Arm, Outer 71.55 0.16 4.89 Rt. Foream, Inner 84.22 0.19 5.76 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Thigh 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 Background 2: 65.16 Background 3: 72.33 Average Background: 70.83	2	Ear	39.51	0.00	2.70	628
Upper Back/Nape 27.39 0.06 1.87 Abdomen 51.16 0.12 3.50 Middle Back 39.27 0.09 2.68 Armpit (Axillae) 68.75 0.16 4.70 Right Am, Inner 52.22 0.12 3.57 Left Arm, Outer 71.55 0.16 4.89 Rt. Forearm, Inner 84.22 0.19 5.76 Left Hand/Glove 84.36 0.19 5.77 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 19.10 0.07 2.08 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 2: 65.16 85.16 4.62 Background 3: 72.33 72.33	က	Chin/Neck	24.82	90.0	1.70	1000
Abdomen 51.16 0.12 3.50 Middle Back 39.27 0.09 2.68 Armpit (Axillae) 68.75 0.16 4.70 Right Am, Inner 52.22 0.12 3.57 Left Am, Outer 71.55 0.16 4.89 Rt. Foream, Inner 84.22 0.19 5.77 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Thigh 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 Background 2: 65.16 Background 3: 72.33 Average Background: 70.83	4	Upper Back/Nape	27.39	90.0	1.87	906
Middle Back 39.27 0.09 2.68 Armplt (Axillae) 68.75 0.16 4.70 Right Am, Inner 52.22 0.12 3.57 Left Arm, Outer 71.55 0.16 4.89 Rt. Forearm, Inner 84.22 0.19 5.76 Left Hand/Glove 84.36 0.19 5.77 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 19.10 0.07 2.08 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 72.33 Average Background 3: 72.33	ഹ	Abdomen	51.16	0.12	3.50	485
Ampit (Axillae) 68.75 0.16 4.70 Right Am, Inner 52.22 0.12 3.57 Left Arm, Outer 71.55 0.16 4.89 Rt. Forearm, Inner 84.22 0.19 5.77 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 Background 2: 65.16 Background 3: 72.33 Average Background: 70.83	9	Middle Back	39.27	0.09	2.68	632
Right Am, Inner 52.22 0.12 3.57 Left Arm, Outer 71.55 0.16 4.89 Rt. Foream, Inner 84.22 0.19 5.76 Left Hand/Glove 84.36 0.19 5.77 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Thigh 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 74.99 8ackground 3: 72.33 Average Background: 70.83 70.83	7	Armpit (Axillae)	68.75	0.16	4.70	361
Left Arm, Outer 71.55 0.16 4.89 Rt. Forearm, Inner 84.22 0.19 5.76 Left Hand/Glove 84.36 0.19 5.77 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Thigh 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 Background 2: 65.16 Background 3: 72.33 Average Background: 70.83	∞	Right Arm, Inner	52.22	0.12	3.57	475
Rt. Forearm, Inner 84.22 0.19 5.76 Left Hand/Glove 84.36 0.19 5.77 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Thigh 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 Average Background 3: 72.33 Average Background: 70.83	တ	Left Arm, Outer	71.55	0.16	4.89	347
Left Hand/Glove 84.36 0.19 5.77 Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Thigh 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 72.33 Average Background: 70.83	9	Rt. Forearm, Inner	84.22	0.19	5.76	295
Lower Back 27.73 0.06 1.90 Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Thigh 19.10 0.07 2.10 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 4.62 Background 2: 65.16 55.16 Background 3: 72.33 Average Background: 70.83	Ξ	Left Hand/Glove	84.36	0.19	2.77	294
Groin 22.74 0.05 1.55 Crotch 30.44 0.07 2.08 Inner Left Thigh 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 72.33 Average Background: 70.83	12	Lower Back	27.73	90.0	1.90	892
Crotch Inner Left Thigh Inner Left Shin Background 1: 74.99 30.44 0.07 2.08 2.08 Inner Left Shin 30.67 0.07 Left Foot/Boot Background 1: 74.99 Background 2: 65.16 Background 3: 72.33 Average Background: 70.83 4.62	13	Groin	22.74	0.05	1.55	1092
Inner Left Thigh 19.10 0.04 1.31 Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 74.99 Background 2: 65.16 65.16 Average Background: 70.83	14	Crotch	30.44	0.07	2.08	816
Inner Left Shin 30.67 0.07 2.10 Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 Average Background 3: 72.33 Average Background: 70.83 70.83	5	Inner Left Thigh	19.10	0.04	1.3	1300
Left Foot/Boot 67.55 0.15 4.62 Background 1: 74.99 Background 3: 72.33 Average Background: 70.83	16	Inner Left Shin	30.67	0.07	2.10	808
_]	11	Left Foot/Boot	67.55	0.15	4.62	367
		Background 1:				
		Background 2:	65.16			
		Background 3:	72.33			
		Average Background:	70.83			

Section 1 - Summary of Results	ny of Results	
Date of Test:	25-Jun-98	
Suit No.	ဖ	
Size:	_1	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	၉	
Mean Agent Challenge, mg/m ³ :	56.56	
Overall PF:	692	
MRED (HD), Body Region:	31809	Scrotum
Systemic MRED (VX), Headache:	6924	
Systemic MRED (VX), Nausea:	17311	
Exposure Dosage, mg-min/m³:	1697	
Section 2 - Factors, Calculations and Notes	culations and I	Votes
Sampler Flow Rate, cm³/min	14.63	
Min GC-Detectable Mass, ng:	6.98	
Min GC-Detectable Concentration:	0.016	
Maximum Measureable PF:	3558	
Background Level, ng:	70.83	
'Blank Mass'	34.8065	
Avg Non-MS Peak	0.00	
BBL	Below Background Level	ound Level
•	•	

Section 1 - Summary of Results	nary of Results		Section 3 - PSD	
Date of Test:	25-Jun-98			
Suit No.	7	PSD No.	PSD Location	
Size:	×	-	Scalp	
Test Participant:	Identify Subj.	2	Ear	-
Configuration:	Kappler CPF3	က	Chin/Neck	
Duration of Test, min:	30	4	Upper Back/Nape	
Mean Agent Challenge, mg/m3:	58.00	2	Abdomen	_
Overall PF:	658	9	Middle Back	
MRED (HD), Body Region:	18876 Scrotum	7	Ampit (Axillae)	
Systemic MRED (VX), Headache:	6576	8	Right Arm, Inner	
Systemic MRED (VX), Nausea:	16439	6	Left Arm, Outer	
Exposure Dosage, mg-min/m ³ :	1740	9	Rt. Forearm, Inner	
		=	Left Hand/Glove	
Section 2 - Factors, Calculations and Notes	culations and Notes	12	Lower Back	

PF at PSD Location

Local Dosage at P PSD

Concentration

Corrected for Background

at PSD

MeS, mgmin/m3

> MeS, mg/m³ Mean Local

MeS, ng

Data, Calculations and Results

520 753 585 1968

2.31 2.98

0.08

0.11

48.95 33.83

35.26 10.42

0.88

0.10

43.54 12.94 2.67 0.97

39.13

2.71 9.89

0.09

14.25 39.68

651 642 176 331 796 739 484

5.26

0.18

0.33

144.71

76.98 31.99 2.35 3.60

34.43

0.12 0.08

13.36

inner Left Thigh nner Left Shin Left Foot/Boot

15 15 16 17

Crotch Groin

65.16 72.33 70.83

Background 1: Background 2: Background 3: Average Background:

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3649
Background Level, ng:	70.83
Blank Mass	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

Section 1 - Summary of Results	iry of Results		
Date of Test:	25-Jun-98		
Suit No.	∞ ≥		
orce. Test Participant: Confinuration:	Identify Subj. Kappler CPF3		
Duration of Test, min:	30		
Mean Agent Challenge, mg/m3:	58.00		
Overall PF:	488		
MRED (HD), Body Region:	14823	Scrotum	
Systemic MRED (VX), Headache:	4880		
Systemic MRED (VX), Nausea:	12200	,	
Exposure Dosage, mg-min/m³:	1740		

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3649
Background Level, ng:	70.83
Blank Mass	34.8065
Avg Non-MS Peak	0.00
188	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	suits	
			,	MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	64.06	0.15	4.38	397
8	Ear	49.35	0.11	3.37	516
က	Chin/Neck	33.24	90:0	2.27	992
4	Upper Back/Nape	37.75	0.00	2.58	674
2	Abdomen	20.83	0.05	1.42	1222
9	Middle Back	20.99	0.05	1.43	1213
7	Armpit (Axillae)	43.85	0.10	3.00	581
&	Right Arm, Inner	60.22	0.14	4.12	423
6	Left Arm, Outer	76.56	0.17	5.23	333
우	Rt. Forearm, Inner	214.13	0.49	14.64	119
=	Left Hand/Glove	114.46	0.26	7.82	222
42	Lower Back	35.54	0.08	2.43	716
1 3	Groin	32.98	0.08	2.25	772
4	Crotch	96.99	0.15	4.58	380
5	Inner Left Thigh	35.38	0.08	2.42	720
16	Inner Left Shin	44.24	0.10	3.02	275
17	Left Foot/Boot	55.91	0.13	3.82	455
	Background 1:	74.99			
	Background 2:	65.16			
	Background 3:	72.33			
	Average Background:	70.83			

MeS, ng MeS, mg/m³ MeS, mg/m³ MeS, mg/m³ MeS, mg/m³ Mes, mg/m³ min/m³ Mean Local Loc		Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and R	esuits	
MeS, ng MeS, mg/m³ min/m³ PSD Location Corrected for Concentration at PSD Mean Local Lo		·		•	MeS, mg-	
PSD Location Corrected for Scale Local Background Scale Local Local Local Scale Local			MeS, ng	MeS, mg/m ³	min/m ³	
PSD Location Corrected for Sach Scalp Concentration at PSD Dosage at PSD Scalp 116.30 0.26 7.95 Ear 78.46 0.18 5.36 Chin/Neck 98.30 0.22 6.72 Upper Back/Nape 18.81 0.04 1.29 Abdomen 97.50 0.22 6.66 Middle Back 82.64 0.19 5.65 Armpit (Axillae) 52.39 0.14 4.07 Right Arm, Inner 52.39 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 38.35 0.09 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.03 9.05 Crotch 9.38 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 2: 60.26 8 8 Background 3: 44.62 9.03 9.05 Background 5:				Mean Local	Local	
PSD Location Background at PSD PSD Scalp 116.30 0.26 7.95 Ear 78.46 0.18 5.36 Chin/Neck 98.30 0.22 6.72 Upper Back/Nape 18.81 0.04 1.29 Abdornen 97.50 0.22 6.66 Middle Back 82.64 0.19 5.65 Armpit (Axillae) 59.52 0.14 4.07 Right Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 2.65 Loft Hand/Glove 38.35 0.09 2.62 Crotch 9.38 0.02 0.05 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 60.26 Background 3: 44.62 0.0			Corrected for	Concentration	Dosage at	PF at PSD
Scalp 116:30 0.26 7.95 Ear 78.46 0.18 5.36 Chin/Neck 98:30 0.22 6.72 Upper Back/Nape 18.81 0.04 1.29 Abdomen 97:50 0.22 6.66 Middle Back 82.64 0.19 5.65 Armpit (Axillae) 59:52 0.14 4.07 Hight Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 20.65 Loft Hand/Glove 38.35 0.09 2.62 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 2: 60.26 0.03 0.87 Background 3: 44.62 <	PSD No.	_	Background	at PSD	PSD	Location
Ear 78.46 0.18 5.36 Chin/Neck 98.30 0.22 6.72 Upper Back/Nape 18.81 0.04 1.29 Abdomen 97.50 0.22 6.65 Middle Back 82.64 0.19 5.65 Armpit (Axillae) 59.52 0.14 4.07 Right Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 20.65 Lower Back 106.65 0.24 7.29 Groin 132.47 0.03 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.87 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 Background 2: 60.26 60.26 Background 3: 44.62	_	Scalp	116.30	0.26	7.95	509
Chin/Nack 98.30 0.22 6.72 Upper Back/Nape 18.81 0.04 1.29 Abdomen 97.50 0.22 6.66 Middle Back 82.64 0.19 5.65 Armpit (Axillae) 59.52 0.14 4.07 Right Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.03 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 2: 60.26 8 0.02 0.70 Background 3: 44.62 0.03 0.03 0.87	84	Ear	78.46	0.18	5.36	310
Upper Back/Nape 18.81 0.04 1.29 Abdomen 97.50 0.22 6.66 Middle Back 82.64 0.19 5.65 Armpit (Axillae) 59.52 0.14 4.07 Right Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 Background 3: 44.62 Average Background: 53.65 0.03 0.03 0.87	က	Chin/Neck	98.30	0.22	6.72	247
Abdomen 97.50 0.22 6.66 Middle Back 82.64 0.19 5.65 Armpit (Axillae) 59.52 0.14 4.07 Right Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 20.65 Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Shin 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 8ackground 3: 44.62 Background: 53.65 0.24 7.29	4	Upper Back/Nape	18.81	0.04	1.29	1291
Middle Back 82.64 0.19 5.65 Armpit (Axillae) 59.52 0.14 4.07 Right Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 20.65 Left Hand/Glove 38.35 0.09 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 8 Background 2: 60.26 8 8 Average Background: 53.65 8	ιΩ	Abdomen	97.50	0.22	99.9	249
Armpit (Axillae) 59.52 0.14 4.07 Right Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 20.65 Left Hand/Glove 38.35 0.09 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 Background 3: 44.62 Average Background: 53.65 3.365 Average Background 5: 60.26	9	Middle Back	82.64	0.19	5.65	294
Hight Arm, Inner 52.99 0.12 3.62 Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 20.65 Left Hand/Glove 38.35 0.09 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 Background 3: 44.62 Average Background: 53.65 33.65 33.62	7	Armpit (Axillae)	59.52	0.14	4.07	408
Left Arm, Outer 204.72 0.47 13.99 Rt. Forearm, Inner 302.12 0.69 20.65 Left Hand/Glove 38.35 0.09 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 50.26 Background 3: 44.62 Average Background: 53.65 33.65 33.69	80	Right Arm, Inner	52.99	0.12	3.62	458
Rt. Forearm, Inner 302.12 0.69 20.65 Left Hand/Glove 38.35 0.09 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 Background 3: 44.62 Average Background: 53.65	6	Left Arm, Outer	204.72	0.47	13.99	119
Left Hand/Glove 38.35 0.09 2.62 Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 Background 3: 44.62 Average Background: 53.65 60.26 Average Background 3: 44.62	우	Rt. Forearm, Inner	302.12	69.0	20.65	8
Lower Back 106.65 0.24 7.29 Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 8ackground 3: 44.62 Average Background: 53.65 33.65 33.65	=	Left Hand/Glove	38.35	0.09	2.62	633
Groin 132.47 0.30 9.05 Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 8ackground 3: 44.62 Average Background: 53.65 8ackground 3: 44.62	12	Lower Back	106.65	0.24	7.29	228
Crotch 9.38 0.02 0.64 Inner Left Thigh 11.77 0.03 0.80 Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 60.26 60.26 Background 2: 60.26 44.62 Average Background: 53.65	ಕಾ	Groin	132.47	0:30	9.02	183
Inner Left Thigh	4	Crotch	9.38	0.05	0.64	2589
Inner Left Shin 10.18 0.02 0.70 Left Foot/Boot 12.73 0.03 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 0.87 12.73 12.73 0.87 12.73	5	Inner Left Thigh	11.77	0.03	0.80	2063
Left Foot/Boot 12.73 0.03 0.87 Background 1: 56.06 Background 2: 60.26 Background 3: 44.62 Average Background: 53.65	9	Inner Left Shin	10.18	0.02	0.70	2386
_	11	Left Foot/Boot	12.73	0.03	0.87	1908
		Background 1:	56.06			
		Background 2:	60.26			
		Background 3:	44.62			
		Average Background:	53.65			

Section 1 - Summary of Results	nary of Result	89
Date of Test:	30-Jun-98	
Suit No.	6	
Size:	ᅻ	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	~
Duration of Test, min:	99	
Mean Agent Challenge, mg/m ³ :	55.35	
Overall PF:	412	
MRED (HD), Body Region:	31879	Chin & Neck
Systemic MRED (VX), Headache:	4121	
Systemic MRED (VX), Nausea:	10302	
Exposure Dosage, mg-min/m³:	1661	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3482
Background Level, ng:	53.65
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level
	•

				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	23.78	0.05	1.63	1021
2	Ear	33.68	0.08	2.30	721
က	Chin/Neck	28.18	90:0	1.93	862
4	Upper Back/Nape	21.53	0.05	1.47	1128
S.	Abdomen	52.10	0.12	3.56	466
9	Middle Back	45.09	0.10	3.08	239
7	Ampit (Axillae)	98.70	0.22	6.75	246
80	Right Arm, Inner	54.23	0.12	3.71	448
6	Left Arm, Outer	108.49	0.25	7.42	224
9	Rt. Forearm, Inner	218.19	0:20	14.91	111
=	Left Hand/Glove	57.90	0.13	3.96	420
12	ower Back	24.39	90:0	1.67	966
13	Groin	17.68	0.04	1.21	1374
4	Crotch	12.56	0.03	0.86	1934
15	Inner Left Thigh	18.41	0.04	1.26	1319
16	Inner Left Shin	31.23	0.07	2.13	8//
4	Left Foot/Boot	103.20	0.24	7.05	232
L	Background 1:	56.06			
	Background 2:	60.26			
	Background 3:	44.62			
	Average Background:	53.65			

Section 1 - Summary of Results	ary of Result	
Date of Test:	30-Jun-98	
Suit No. Size: Test Participant: Configuration: Duration of Test, min: Mean Agent Challenge, mg/m³: Overall PF: MRED (HD), Body Region: Systemic MRED (VX), Headache: Systemic MRED (VX), Nausea: Exposure Dosage, mg-min/m³:	10 XXL Identify Subj. Kappler CPF3 30 55.35 665 75413 6649 16622	3 Scrotum

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3482
Background Level, ng:	53.65
Blank Mass*	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

Section 1 - Summary of Results	ary of Results		
Date of Test:	30-Jun-98		
Suit No.	=		
Size:	_		
Test Participant:	Identify Subj.		
Configuration:	Kappler CPF3		
Duration of Test, min:	88		
Mean Agent Challenge, mg/m³;	55.79		
Overall PF:	586	•	
MRED (HD), Body Region:	10442	Scrotum	
Systemic MRED (VX), Headache:	5858		
Systemic MRED (VX), Nausea:	14645		
Exposure Dosage, mg-min/m³:	1562		

Min GC-Detectable Mass, ng: Min GC-Detectable Concentration: Maximum Measureable PF: Background Level, ng: Blank Mass Avg Non-MS Peak C.00
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	-	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	esults	
			MeS, ng	MeS, mg/m³	MeS, mg- min/m3	
				Mean Local	Local	
		:	Corrected for	Concentration	Dosage at	PF at PSD
_1	PSU No.	PSD Location	Background	at PSD	rsD	Location
	-	Scalp	14.39	0.04	0.98	1588
	8	Ear	23.45	90.0	1.60	975
	က	Chin/Neck	31.15	90.0	2.13	734
	4	Upper Back/Nape	41.86	0.10	2.86	546
	2	Abdomen	18.77	0.05	1.28	1217
	9	Middle Back	31.10	90.0	2.13	735
	7	Ampit (Axillae)	35.45	0.09	2.42	645
	æ	Right Arm, Inner	33.95	90.0	2.32	673
	6	Left Arm, Outer	34.51	90.0	2.36	662
	우	Rt. Foream, Inner	39.06	0.10	2.67	282
	=	Left Hand/Glove	105.84	0.26	7.23	216
	12	Lower Back	12.81	0.03	0.88	1784
	13	Groin	14.43	0.04	0.99	1584
	4	Crotch	85.36	0.21	5.83	268
	15	Inner Left Thigh	36.71	0.09	2.51	623
	16	Inner Left Shin	13.71	0.03	0.94	1667
	4	Left Foot/Boot	18.42	0.04	1.26	1241
1						
		Background 1:	69.70			
		Background 2:	65.07			
		Background 3:	99.99	•	•	
		Average Background:	63.81			

Section 1 - Summary of Results	ary of Results	,
Date of Test:	30-Jun-98	
Suit No.	12	
Size:	ᅻ	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	:
Duration of Test, min:	58	
Mean Agent Challenge, mg/m3:	55.79	
Overall PF:	099	
MRED (HD), Body Region:	39386	Scrotum
Systemic MRED (VX), Headache:	6604	
Systemic MRED (VX), Nausea:	16509	
Exposure Dosage, mg-min/m ³ :	1562.22	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.017
Maximum Measureable PF:	3276
Background Level, ng:	53.65
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	sults	
		:	3	MeS, mg-	
	•	MeS, ng	Mes, mg/m	min/m3	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	17.86	0.04	1.22	1279
8	Ear	39.16	0.10	2.68	584
ဇ	Chin/Neck	37.96	0.00	2.59	· 209
4	Upper Back/Nape	36.99	0.09	2.53	618
2	Abdomen	27.30	0.07	1.87	837
9	Middle Back	34.09	90:0	2.33	670
7	Armpit (Axillae)	44.14	0.11	3.02	518
œ	Right Arm, Inner	42.85	0.10	2.93	533
တ	Left Arm, Outer	54.37	0.13	3.72	420
9	Rt. Forearm, Inner	65.55	0.16	4.48	349
=	Left Hand/Glove	221.81	0.54	15.16	103
4	Lower Back	26.50	90.0	1.81	862
5	Groin	21.60	0.05	1.48	1058
4	Crotch	22.63	90:0	1.55	1010
र	Inner Left Thigh	29.93	0.07	2.05	764
16	Inner Left Shin	33.15	0.08	2.27	689
11	Left Foot/Boot	141.12	0.34	9.62	162
	Background 1:	56.06			
	Background 2:	60.26			
	Background 3:	44.62			
	Average Background:	53.65			

PSD No. PSD Location PSD Locatio	MeS, ng MeS, mg/m³ MeS, mg/m³ Mean Local Corrected for Concentration Background at PSD Scalp A8.53 0.11 Ear 53.21 0.12 Chin/Neck 51.35 0.12 O.12 O.12 O.12 O.13 O.14 O.14 O.14 O.14 O.14 O.15 O.15 O.16 O.1		Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	esuits	
Nies, right Nies, right Nies, right	Nees, rig Nees Nees, rig Nees, rig			37.0	E/1000 3-11	MeS, mg-	
Scalp Corrected for Concentration at PSD Scalp 48.53 0.11 Ear 53.21 0.12 Chin/Neck 51.35 0.12 Upper Back/Nape 56.73 0.13 Abdomen 91.30 0.21 Middle Back 51.86 0.12 Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.99 0.14 Left Arm, Outer 85.58 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 58.35 0.13 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.06 Background 1: 63.70 0.15 Background 2: 52.70 0.16	Corrected for Concentration			Mes, ng	Mean Local	m/um Local	
PSD Location Background at PSD Scalp 48.53 0.11 Ear 53.21 0.12 Chin/Neck 51.35 0.12 Chin/Neck 51.35 0.12 Upper Back/Nape 56.73 0.13 Abdomen 91.30 0.21 Middle Back 51.86 0.12 Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.99 0.14 Left Amn, Outer 85.58 0.19 Left Hand/Glove 81.41 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 63.1 0.16 Background 2: 52.70 0.16	PSD Location Background Scalp 48.53 Ear 53.21 Chin/Neck 51.35 Upper Back/Nape 56.73 Abdomen 91.30 Middle Back 51.86 Armpit (Axillae) 47.44 Right Arm, Inner 61.99 Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 53.43 Inner Left Shin 58.35 Left Foot/Boot 68.36 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43			Corrected for	Concentration	Dosage at	PF at PSD
Scalp 48.53 0.11 Ear 53.21 0.12 Chin/Neck 51.35 0.12 Upper Back/Nape 56.73 0.13 Abdomen 91.30 0.21 Middle Back 51.86 0.12 Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.39 0.14 Left Arm, Outer 85.58 0.19 Left Hand/Glove 81.41 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 63.1 68.36 Background 2: 52.70 85.70	Scalp 48.53 Ear 53.21 Chin/Neck 51.35 Upper Back/Nape 56.73 Abdomen 91.30 Middle Back 51.86 Armpit (Axillae) 47.44 Right Arm, Inner 61.99 Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Left Foot/Boot 68.36 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	PSD No.	PSD Location	Background	at PSD	PSD	Location
Ear 53.21 0.12 Chin/Neck 51.35 0.12 Upper Back/Nape 56.73 0.13 Abdomen 91.30 0.21 Middle Back 51.86 0.12 Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.99 0.14 Left Arm, Outer 85.58 0.19 Rt. Forearm, Inner 73.62 0.17 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 2: 52.70 Background 3: 65.29	Ear 53.21 Chin/Neck 51.35 Upper Back/Nape 56.73 Abdomen 91.30 Middle Back 51.86 Armpit (Axillae) 47.44 Right Arm, Inner 61.99 Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Average Background 1: 6.31 Background 2: 52.70 Background 3: 65.29	-	Scalp	48.53	0.11	3.32	488
Chin/Neck 51.35 0.12 Upper Back/Nape 56.73 0.13 Abdomen 91.30 0.21 Middle Back 51.86 0.12 Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.99 0.14 Left Arm, Outer 85.58 0.19 Lower Back 85.58 0.19 Crotch 73.62 0.10 Groin 44.55 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.15 Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 2: 52.70	Chin/Neck 51.35 Upper Back/Nape 56.73 Abdomen 91.30 Middle Back 51.86 Armpit (Axillae) 47.44 Right Arm, Inner 61.99 Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background 3: 65.29	8	Ear	53.21	0.12	3.64	445
Upper Back/Nape 56.73 0.13 Abdomen 91.30 0.21 Middle Back 51.86 0.12 Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.99 0.14 Left Arm, Outer 85.58 0.19 Rt. Forearm, Inner 73.62 0.17 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 58.35 0.13 Inner Left Shin 58.35 0.16 Background 1: 63.1 68.36 0.16 Background 2: 52.70 Background 3: 65.29	Upper Back/Nape 56.73 Abdomen 91.30 Middle Back 51.86 Armpit (Axillae) 47.44 Right Arm, Inner 61.99 Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 53.43 Inner Left Thigh 58.36 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	<u>ო</u>	Chin/Neck	51.35	0.12	3.51	462
Abdomen 91.30 0.21 Middle Back 51.86 0.12 Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.99 0.14 Left Arm, Outer 85.58 0.19 Lower Back 141.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Shin 58.35 0.16 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29	Abdomen Middle Back Armpit (Axillae) Hight Arm, Inner Right Arm, Outer Rt. Forearm, Inner Left Hand/Glove Left Hand/Glove Rt. 73.62 Left Hand/Glove 85.58 Rt. 73.62 Left Hand/Glove 81.41 Lower Back Groin Crotch Inner Left Thigh Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	4	Upper Back/Nape	56.73	0.13	3.88	418
Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.99 0.14 Left Arm, Outer 85.58 0.19 Rt. Forearm, Inner 73.62 0.17 Left Hand/Glove 81.41 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 2: 52.70	Middle Back 51.86 Armpit (Axillae) 47.44 Right Arm, Inner 61.99 Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 45.12 Crotch 75.62 Left Foot/Boot 68.36 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29	വ	Abdomen	91.30	0.21	6.24	260
Armpit (Axillae) 47.44 0.11 Right Arm, Inner 61.99 0.14 Left Arm, Outer 85.58 0.19 Rt. Forearm, Inner 73.62 0.17 Left Hand/Glove 81.41 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 6.31 65.29 Background 3: 65.29	Armpit (Axillae) 47.44 Right Arm, Inner 61.99 Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	ဖ	Middle Back	51.86	0.12	3.54	457
Right Arm, Inner 61.99 0.14 Left Arm, Outer 85.58 0.19 Rt. Forearm, Inner 73.62 0.17 Left Hand/Glove 81.41 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.16 Left Foot/Boot 68.36 0.16 Background 1: 6.31 68.27 Background 2: 52.70 52.70	Right Arm, Inner 61.99 Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	7	Armpit (Axillae)	47.44	0.11	3.24	200
Left Arm, Outer 85.58 0.19 Rt. Forearm, Inner 73.62 0.17 Left Hand/Glove 81.41 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29	Left Arm, Outer 85.58 Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	۵	Right Arm, Inner	61.99	0.14	4.24	382
Rt. Forearm, Inner 73.62 0.17 Left Hand/Glove 81.41 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29	Rt. Forearm, Inner 73.62 Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	6	Left Arm, Outer	85.58	0.19	5.85	277
Left Hand/Glove 81.41 0.19 Lower Back 44.55 0.10 Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 2: 52.70	Left Hand/Glove 81.41 Lower Back 44.55 Groin 45.12 Crotch 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	9	Rt. Forearm, Inner	73.62	0.17	5.03	322
Crower Back 44.55 0.10	Lower Back	1	Left Hand/Glove	81.41	0.19	5.56	291
Groin 45.12 0.10 Crotch 53.43 0.12 Inner Left Thigh 36.36 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29	Groin 45.12 Crotch 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	12	Lower Back	44.55	0.10	3.04	532
Crotch 53.43 0.12 Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29	Crotch 53.43 Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	13	Groin	45.12	0.10	3.08	525
Inner Left Thigh 36.96 0.08 Inner Left Shin 58.35 0.13 Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29	Inner Left Thigh 36.96 Inner Left Shin 58.35 Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	4	Crotch	53.43	0.12	3.65	444
Inner Left Shin	Left Foot/Boot 68.35 Left Foot/Boot 68.35 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	15	Inner Left Thigh	36.96	90.0	2.53	641
Left Foot/Boot 68.36 0.16 Background 1: 6.31 Background 3: 65.29	Left Foot/Boot 68.36 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	16	Inner Left Shin	58.35	0.13	3.99	406
_	_	17	Left Foot/Boot	68.36	0.16	4.67	347
l			Background 1:	6.31			
			Background 2:	52.70			
			Background 3:	62.29			
			Average Background:	41.43			

Section 1 - Summary of Results	ary of Results	
Date of Test:	1-Jul-98	
Suit No.	ŧ	
Size:	XX	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	_
Duration of Test, min:	8	
Mean Agent Challenge, mg/m3:	24.00	
Overall PF:	439	
MRED (HD), Body Region:	17301	Scrotum
Systemic MRED (VX), Headache:	4388	
Systemic MRED (VX), Nausea:	10969	
Exposure Dosage, mg-min/m ³ :	1620	

Section 2 - Factors, Calculations and Notes	utations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3397
Background Level, ng:	41.43
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

PSD No. PSD Location PSD Location MeS, ng MeS, mg/m3 min/m3 min/	MeS, ng MeS, mg/ms MeS, mg/ms MeS, mg/ms Scalp Acrected for Scalp Corrected for Concentration at PSD Local Local Local Local Local Local Local at PSD Scalp 34.58 0.08 2.36 Ear 50.56 0.12 3.46 Chir/Neck 34.14 0.08 2.37 Abdomen 33.72 0.08 2.33 Ampit (Axillae) 45.51 0.10 2.37 Right Arm, Inner 29.03 0.07 1.98 Rt. Forearm, Inner 29.03 0.00 2.51 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 2.89 Groin 44.67 0.10 3.05 Left Foot/Boot 39.31 0.09 2.72 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43 9.09 2.72		Section 3 - PSD Data, Calculations and Results	D Data, Calcu	lations and R	esuits	
PSD Location Corrected for Background at PSD Concentration at PSD Local Local PSD Scalp 34.58 0.08 2.36 Ear 50.56 0.12 3.46 Chin/Neck 34.14 0.08 2.37 Abdomen 33.72 0.08 2.37 Abdomen 33.72 0.08 2.53 Ampit (Axillae) 45.51 0.10 3.11 Right Arm, Inner 29.03 0.07 1.98 Rt. Forearm, Inner 476.51 1.09 2.53 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Thigh 46.50 0.11 3.42 Background 1: 6.31 0.09 2.72 Background 2: 52.70 0.99 2.72 Background 3: 65.29 0.11 3.42 Background 3: 65.29 0.11 3.42	PSD Location Corrected for Concentration at PSD Local Local Ackground at PSD Local Ackground at Ackgroun			MeS, ng	MeS, mg/m³	MeS, mg- min/m3	
PSD Location Background at PSD a	PSD Location Confeded for June Action at PSD Scalp Confeded for June Action at PSD PSD PSD Scalp Additional Action Ac				Mean Local	Local	
Scalp 34.58 0.08 2.36 Ear 50.56 0.12 3.46 Chir/Neck 34.14 0.08 2.33 Upper Back/Nape 34.63 0.08 2.33 Abdomen 33.72 0.08 2.37 Ampit (Axillae) 45.51 0.10 2.53 Ampit (Axillae) 45.51 0.10 3.11 Right Am, Inner 29.03 0.07 1.98 Rt. Foream, Inner 29.03 0.07 1.98 Rt. Foream, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Shin 50.07 0.11 3.42 Left Foot/Boot 39.84 0.09 2.72 Background 2: 52.70 Background: 41.43	Scalp 34,58 0.08 2.36 Ear 50,56 0.12 3.46 Chir/Neck 34,14 0.08 2.33 Upper Back/Nape 34,63 0.08 2.33 Abdomen 33,72 0.08 2.37 Middle Back 37.01 0.08 2.53 Ampit (Axillae) 45.51 0.10 3.11 Right Am, Inner 29.03 0.07 1.98 Rt. Foream, Inner 29.03 0.07 1.98 Rt. Foream, Inner 476.51 1.09 32.57 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Shin 50.07 0.11 3.42 Left Foot/Boot 52.70 Background 2: 52.70 Background 3: 65.29 41.43 9.09 2.72	PSD No.	PSD Location	Background	Concentration at PSD	Dosage at	PF at PSD
Ear 50.56 0.12 3.46 Chir/Neck 34.14 0.08 2.33 Upper Back/Nape 34.63 0.08 2.37 Abdomen 33.72 0.08 2.53 Ampit (Axillae) 45.51 0.10 3.11 Right Am, Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Foream, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Crotch 39.31 0.09 2.69 6 Inner Left Thigh 46.50 0.11 3.42 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background 3: 65.29	Chir/Neck 34.14 0.08 2.33 Upper Back/Nape 34.63 0.08 2.37 Abdomen 33.72 0.08 2.30 Ampli (Axilae) 45.51 0.10 3.11 Right Am, Inner 29.03 0.07 1.98 Rt. Foream, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Crotch 39.31 0.09 2.69 6 Inner Left Shin 50.07 0.11 3.18 5 Left Foot/Boot 39.84 0.09 2.72 55 Background 2: 52.70 Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Chiracter Average Background 3: 65.29 Average Background 3:	-	Scalp	34.58	0.08	98.6	COCARION
Chir/Neck 34.14 0.08 2.33 Upper Back/Nape 34.63 0.08 2.37 Abdomen 33.72 0.08 2.30 Middle Back 37.01 0.08 2.53 Ampli (Axillae) 45.51 0.10 3.11 Right Arm, Outer 36.72 0.08 2.51 Left Arm, Outer 476.51 1.09 32.57 Lower Back 42.33 0.10 2.89 5 Groin 44.67 0.10 3.05 5 Crotch 39.31 0.09 2.69 6 Inner Left Thigh 46.50 0.11 3.42 4 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	Chir/Neck 34.14 0.08 2.33 Upper Back/Nape 34.63 0.08 2.37 Abdomen 33.72 0.08 2.30 Middle Back 37.01 0.08 2.53 Amplit (Axillae) 45.51 0.10 3.11 Right Am, Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Foream, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Crotch 39.31 0.09 2.69 6 Inner Left Thigh 46.50 0.11 3.18 5 Left Foot/Boot 39.84 0.09 2.72 5 Background 2: 52.70 Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29	8	Ear	50.56	0.12	3.46	3 6
Upper Back/Nape 34.63 0.08 2.37 Abdomen 33.72 0.08 2.30 Ampit (Axillae) 45.51 0.10 3.11 Right Arm, Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Forearm, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Crotch 39.31 0.09 2.69 Inner Left Thigh 46.50 0.11 3.42 4 Left Foot/Boot 39.84 0.09 2.72 5.12 Background 2: 52.70 Background 3: 65.29 Average Background 3: 65.29 65.20 Average Background 3: 65.29 Average Background 3: 65.20 Av	Abdomen 33.72 0.08 2.37 Abdomen 33.72 0.08 2.30 Middle Back 37.01 0.08 2.53 Ampit (Axillae) 45.51 0.10 3.11 Right Arm, Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Forearm, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 5 Crotch 39.31 0.09 2.69 Inner Left Shin 50.07 0.11 3.42 4 Left Foot/Boot 39.84 0.09 2.72 5 Background 1: 6.31 Background 3: 65.29 Average Background: 41.43	က	Chin/Neck	34.14	0.08	2.33	604
Abdomen 33.72 0.08 2.30 Middle Back 37.01 0.08 2.53 Ampli (Axillae) 45.51 0.10 3.11 Right Am, Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Forearm, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Shin 50.07 0.11 3.18 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background 3: 65.29	Abdomen 33.72 0.08 2.30 Middle Back 37.01 0.08 2.53 Ampli (Axillae) 45.51 0.10 3.11 Right Am, Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Forearm, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Shin 50.07 0.11 3.18 Background 1: 6.31 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	4	Upper Back/Nape	34.63	90.0	2.37	684
Middle Back 37.01 0.08 2.53 Ampli (Axillae) 45.51 0.10 3.11 Right Am, Inner 36.72 0.08 2.51 Left Am, Outer 29.03 0.07 1.98 Rt. Foream, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Shin 50.07 0.11 3.18 Inner Left Shin 50.07 0.11 3.42 4 Background 1: 63.79 0.11 3.42 4 Background 2: 52.70 52.72 5 Average Background 3: 65.29 6	Middle Back 37.01 0.08 2.53 Ampli (Axillae) 45.51 0.10 3.11 Right Am, Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Foream, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Thigh 46.50 0.11 3.42 4 Inner Left Shin 50.07 0.11 3.42 4 Background 1: 6.31 8c5.29 8c5.29 Average Background: 41.43 5c.29 8c5.29	2	Abdomen	33.72	0.08	2.30	203
Amplit (Axillae) 45.51 0.10 3.11 Right Am., Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Forearm, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Thigh 46.50 0.11 3.42 Inner Left Shin 50.07 0.11 3.42 Background 1: 6.31 8ackground 2: 52.70 Background 3: 65.29 Average Background: 41.43	Amplit (Axillae) 45.51 0.10 3.11 Right Am, Inner 36.72 0.08 2.51 Left Arm, Outer 29.03 0.07 1.98 Rt. Foream, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Thigh 46.50 0.11 3.42 Inner Left Shin 50.07 0.11 3.42 Left Foot/Boot 39.84 0.09 2.72 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	9	Middle Back	37.01	0.08	2.53	640
Hight Am, Inner 36.72 0.08 2.51	Hight Am, Inner 36.72 0.08 2.51		Ampit (Axillae)	45.51	0.10	3.11	521
Left Arm, Outer 29.03 0.07 1.98 Rt. Forearm, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Shin 50.07 0.11 3.18 Inner Left Shin 50.07 0.11 3.42 Background 1: 6.31 Background 3: 65.29 Average Background 3: 65.29 Average Background 3: 65.29 Average Background 4: 41.43 Average Background 4: 41.43 Average Background 5: 65.29 Average Background 5: 65.29 Average Background 5: 65.20 Average Background 5	Left Arm, Outer 29.03 0.07 1.98 Rt. Forearm, Inner 476.51 1.09 32.57 Left Hand/Glove 85.63 0.20 5.85 Lower Back 42.33 0.10 2.89 Groin 44.67 0.10 3.05 Crotch 39.31 0.09 2.69 Inner Left Thigh 46.50 0.11 3.42 Inner Left Shin 50.07 0.11 3.42 Left Foot/Boot 39.84 0.09 2.72 Background 2: 52.70 Background 3: 65.29 Average Background: 41.43	∞ (Right Arm, Inner	36.72	90:0	2.51	645
Rt. Forearm, Inner 476.51 1.09 32.57	Rt. Forearm, Inner 476.51 1.09 32.57	ກ	Left Arm, Outer	29.03	0.07	-1 86:	817
Left Hand/Glove 85.63 0.20 5.85	Left Hand/Glove 85.63 0.20 5.85	0	Rt. Forearm, Inner	476.51	1.09	32.57	20
Groin 44.67 0.10 2.89	Groin 44.67 0.10 2.89		Left Hand/Glove	85.63	0.20	5.85	277
Groin 44.67 0.10 3.05	Groin 44.67 0.10 3.05		Lower Back	42.33	0.10	2.89	260
Crotch Inner Left Thigh Inner Left Shin So.07 39.31 0.09 2.69 Inner Left Shin So.07 60.01 3.18 Inner Left Shin So.07 60.11 3.42 Left Foot/Boot Background 1: 6.31 89.84 0.09 2.72 Background 2: 52.70 52.70 Average Background 3: 65.29 Average Background: 41.43 41.43	Crotch Inner Left Thigh Inner Left Shin So.07 39.31 0.09 2.69 Inner Left Shin 50.07 6.01 3.42 Left Foot/Boot Background 1: 6.31 39.84 0.09 2.72 Background 2: 52.70 52.70 Average Background: 41.43		Groin	44.67	0.10	3.05	531
Inner Left Thigh	Inner Left Thigh		Crotch	39.31	0.09	2.69	603
Inner Left Shin	Inner Left Shin		Inner Left Thigh	46.50	0.11	3.18	510
Left Foot/Boot	Left Foot/Boot		Inner Left Shin	20.02	0.11	3.42	473
1			Left Foot/Boot	39.84	0.09	2.72	595
_			Background 1:	6.31			•
			Background 2:	52.70			
			Background 3:	62.29			
			Average Background:	41.43			

Section 1 - Summary of Results	ary of Result	g
Date of Test:	1-Jul-98	
Suit No.	14	
Size:	Ž	
Test Participant:	Identify Suhi	
Configuration:	Kappler CPE3	
Duration of Test, min:	30	
Mean Agent Challenge, mg/m3:	54.00	
Overall PF:	424	
MRED (HD), Body Region:	23516	Scrotum
Systemic MRED (VX), Headache:	4242	
Systemic MRED (VX), Nausea:	10606	
Exposure Dosage, mg-min/m ³ :	1620	

Section 2 - Factors, Calculations and Notes	Iculations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3397
Background Level, ng:	41.43
'Blank Mass'	34 8065
Avg Non-MS Peak	000
788	Below Background Level

39 33 34 11 12 39 39 39 39 39 39 39 39 39 39 39 39 39	MeS, ng MeS, mg/m³ Scalp Corrected for Concentration Background at PSD Scalp 22.05 0.05 Ear 30.89 0.07 Chir/Neck 26.10 0.05 Abdomen 15.40 0.09 Middle Back 22.26 0.05 Ampit (Axillae) 40.71 0.09 Right Arm, Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Rt. Forearm, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 2: 142.18 Background 3: Background 3: 125.50 Average Background: 139.75		Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	sults	
MeS, ng MeS, mg/m min/m3 Mes, ng MeS, mg/m min/m3 Corrected for Concentration Dosage at PSD Location Background at PSD PSD PSD Ear 30.89 0.07 2.11	MeS, ng MeS, mg/m				6	MeS, mg-	
PSD Location Corrected for Concentration at PSD Corrected for Concentration at PSD Dosage at Location at PSD Corrected for Concentration at PSD PSD Location at PSD PSD Location PSD Scalp 22.05 0.05 1.51 Ear 30.89 0.07 2.11 Chin/Neck 26.10 0.06 1.78 Upper Back/Nape 37.97 0.09 2.60 Abdomen 15.40 0.04 1.05 Middle Back 22.26 0.05 1.52 Ampit (Axillae) 40.71 0.09 2.78 Right Arm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.01 crotch 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Foot/Boot 78.81 0.10 3.10 Background 2: 142.18 3.01 3.10 </th <th>PSD Location Corrected for Background at PSD Ear Corrected for Concentration at PSD Ear Scalp 22.05 0.05 Ear 30.89 0.07 Chir/Neck 26.10 0.06 Upper Back/Nape 37.97 0.09 Abdomen 15.40 0.04 Middle Back 22.26 0.05 Right Arm, Inner 189.11 0.03 Rt. Forearm, Inner 189.11 0.04 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.86 0.07 Crotch 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 8ackground 2: 142.18 Background 3: 125.50 Average Background: 139.75</th> <th></th> <th></th> <th>MeS, ng</th> <th>MeS, mg/m</th> <th>min/m3</th> <th></th>	PSD Location Corrected for Background at PSD Ear Corrected for Concentration at PSD Ear Scalp 22.05 0.05 Ear 30.89 0.07 Chir/Neck 26.10 0.06 Upper Back/Nape 37.97 0.09 Abdomen 15.40 0.04 Middle Back 22.26 0.05 Right Arm, Inner 189.11 0.03 Rt. Forearm, Inner 189.11 0.04 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.86 0.07 Crotch 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 8ackground 2: 142.18 Background 3: 125.50 Average Background: 139.75			MeS, ng	MeS, mg/m	min/m3	
PSD Location Background at PSD PSD Scalp 22.05 0.05 1.51 Ear 30.89 0.07 2.11 Chin/Neck 26.10 0.06 1.78 Upper Back/Nape 37.97 0.09 2.60 Abdomen 15.40 0.04 1.05 Middle Back 22.26 0.05 1.52 Ampit (Axillae) 40.71 0.09 2.78 Hight Arm, Inner 58.68 0.13 4.01 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.86 0.07 2.08 Crotch 30.86 0.07 2.01 Inner Left Thigh 19.15 0.04 1.31 Inner Left Foot/Boot 78.81 0.18 5.39 Background 2: 142.18 8adsground 3: 125.50 Average Background: 139.75 1.39	PSD Location December of at PSD and a			3	Mean Local	Popper of	DE at DOL
Scalp 22.05 0.05 1.51 Ear 30.89 0.07 2.11 Chir/Neck 26.10 0.06 1.78 Upper Back/Nape 37.97 0.09 2.60 Abdomen 15.40 0.04 1.05 Middle Back 22.26 0.05 1.52 Ampit (Axillae) 40.71 0.09 2.78 Right Arm, Inner 58.68 0.13 4.01 Left Arm, Outer 30.00 0.07 2.05 Rt. Forearm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 2: 142.18 8ackground: 136.75 Average Background: 139.	Scalp 22.05 0.05 Ear 30.89 0.07 Chir/Neck 26.10 0.06 Upper Back/Nape 37.97 0.09 Abdomen 15.40 0.04 Middle Back 22.26 0.05 Ampit (Axillae) 40.71 0.09 Right Am, Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Rt. Foream, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 2: 142.18 Background 3: 125.50 Average Background: 139.75	PSD No.	PSD Location	Background	at PSD	PSD	Location
Ear 30.89 0.07 2.11 Chin/Neck 26.10 0.06 1.78 Upper Back/Nape 37.97 0.09 2.60 Abdomen 15.40 0.04 1.05 Middle Back 22.26 0.05 1.52 Ampit (Axillae) 40.71 0.09 2.78 Right Am, Inner 58.68 0.13 4.01 Left Arm, Outer 30.00 0.07 2.05 Rt. Foream, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 2: 142.18 8ackground 3: 125.50 Average Background: 139.75 139.75	Ear 30.89 0.07 Chin/Neck 26.10 0.06 Upper Back/Nape 37.97 0.09 Abdomen 15.40 0.04 Middle Back 22.26 0.05 Armpit (Axillae) 40.71 0.09 Right Am, Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75 139.75	 -	Scalp	22.05	0.05	1.51	1093
Chir/Neck 26.10 0.06 1.78 Upper Back/Nape 37.97 0.09 2.60 Abdomen 15.40 0.04 1.05 Middle Back 22.26 0.05 1.52 Ampit (Axillae) 40.71 0.09 2.78 Right Am, Inner 58.68 0.13 4.01 Left Arm, Outer 30.00 0.07 2.05 Rt. Foream, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.08 Crotch 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 2: 142.18 8 8.39 Background 3: 125.50 8 8.30 9.10 3.10 Average Background: 139.75 9.10 9.10 9.30	Chin/Neck 26.10 0.06 Upper Back/Nape 37.97 0.09 Abdomen 15.40 0.04 Middle Back 22.26 0.05 Ampit (Axillae) 40.71 0.09 Right Am, Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Rt. Foream, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 2: 142.18 Background 3: 125.50	 8	Ear	30.89	0.07	2.11	780
Upper Back/Nape 37.97 0.09 2.60 Abdomen 15.40 0.04 1.05 Middle Back 22.26 0.05 1.52 Ampit (Axillae) 40.71 0.09 2.78 Right Arm, Inner 58.68 0.13 4.01 Left Arm, Outer 30.00 0.07 2.05 Rt. Forearm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.08 Crotch 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 Background 2: 142.18 Background 3: 125.50 Average Background: 139.75	Upper Back/Nape 37.97 0.09 Abdomen 15.40 0.04 Middle Back 22.26 0.05 Ampit (Axillae) 40.71 0.09 Right Am, Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Rt. Forearm, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 2: Background 3: 125.50 Average Background: 139.75	က	Chin/Neck	26.10	90:0	1.78	923
Abdomen 15.40 0.04 1.05 Middle Back 22.26 0.05 1.52 Ampit (Axillae) 40.71 0.09 2.78 Right Arm, Inner 58.68 0.13 4.01 Left Arm, Outer 30.00 0.07 2.05 Rt. Forearm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.08 Crotch 30.86 0.07 2.11 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 Background 2: 142.18 Background 3: 125.50 Average Background: 139.75	Abdomen 15.40 0.04 Middle Back 22.26 0.05 Ampit (Axillae) 40.71 0.09 Right Am, Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Rt. Forearm, Inner 189.11 0.43 Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	 4	Upper Back/Nape	37.97	0.00	2.60	635
Middle Back 22.26 0.05 1.52 Armpit (Axillae) 40.71 0.09 2.78 Right Arm, Inner 58.68 0.13 4.01 Left Arm, Outer 30.00 0.07 2.05 Rt. Forearm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.08 Crotch 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 8ackground 2: 142.18 Background 3: 125.50 Average Background: 139.75	Middle Back 22.26 0.05 Amplt (Axillae) 40.71 0.09 Right Am, Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Rt. Forearm, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 2: Background 3: 125.50 Average Background: 139.75	 S	Abdomen	15.40	0.04	1.05	1565
Ampit (Axillae) 40.71 0.09 2.78 Right Arm, Inner 58.68 0.13 4.01 Left Arm, Outer 30.00 0.07 2.05 Rt. Forearm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 8ackground 2: 142.18 Background 3: 125.50 Average Background: 139.75	Ampit (Axillae) 40.71 0.09 Right Am., Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Rt. Foream, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	9	Middle Back	22.26	0.05	1.52	1083
Right Arm, Inner 58.68 0.13 4.01 Left Arm, Outer 30.00 0.07 2.05 Rt. Forearm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 5.39 Background 2: 142.18 5.39 Average Background 3: 125.50	Right Arm, Inner 58.68 0.13 Left Arm, Outer 30.00 0.07 Rt. Forearm, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 8ackground 2: Background 3: 125.50 Average Background: 139.75	 7	Armpit (Axillae)	40.71	0.00	2.78	265
Left Arm, Outer 30.00 0.07 2.05 Rt. Forearm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.08 Crotch 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 8ackground 2: 142.18 Background 3: 125.50 Average Background: 139.75	Left Arm, Outer 30.00 0.07 Rt. Forearm, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	6 0	Right Arm, Inner	58.68	0.13	4.01	411
Rt. Forearm, Inner 189.11 0.43 12.93 Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.08 Crotch Inner Left Thigh Inner Left Shin 45.35 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 5.39 Background 2: 142.18 5.39 Average Background 3: 125.50	Rt. Forearm, Inner 189.11 0.43 Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 2: Background 3: 125.50 Average Background: 139.75	 6	Left Arm, Outer	30.00	0.07	2.05	803
Left Hand/Glove 79.04 0.18 5.40 Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.08 Crotch 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 8ackground 2: 142.18 Background 3: 125.50 Average Background: 139.75	Left Hand/Glove 79.04 0.18 Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 2: Background 3: 125.50 Average Background: 139.75	 9	Rt. Forearm, Inner	189.11	0.43	12.93	127
Lower Back 20.08 0.05 1.37 Groin 30.47 0.07 2.08 Crotch 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 5.39 Background 2: 142.18 5.39 Average Background 3: 125.50 Average Background:	Lower Back 20.08 0.05 Groin 30.47 0.07 Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 3: Background 3: 125.50 Average Background: 139.75	 =	Left Hand/Glove	79.04	0.18	5.40	302
Groin 30.47 0.07 2.08 Crotch 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 5.39 Background 2: 142.18 5.39 Average Background 3: 125.50	Groin 30.47 0.07 Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	 42	Lower Back	20.08	0.02	1.37	1200
Crotch 30.86 0.07 2.11 Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 5.39 Background 2: 142.18 442.18 Background 3: 125.50 Average Background: 139.75	Crotch 30.86 0.07 Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	13	Groin	30.47	0.07	2.08	791
Inner Left Thigh 19.15 0.04 1.31 Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 5.39 Background 2: 142.18 442.18 Background 3: 125.50 Average Background: 139.75	Inner Left Thigh 19.15 0.04 Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 2: 142.18 Background 3: 125.50 Average Background: 139.75	44	Crotch	30.86	0.07	2.11	781
Inner Left Shin 45.35 0.10 3.10 Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 5.39 Background 2: 142.18 5.39 Average Background 3: 125.50 Average Background: 139.75	Inner Left Shin 45.35 0.10 Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 2: 142.18 Background 3: 125.50 Average Background: 139.75	- 5	Inner Left Thigh	19.15	0.04	1.31	1258
Left Foot/Boot 78.81 0.18 5.39 Background 1: 151.56 Background 2: 142.18 Background 3: 125.50 Average Background: 139.75	Left Foot/Boot 78.81 0.18 Background 1: 151.56 Background 3: 125.50 Average Background: 139.75	 16	Inner Left Shin	45.35	0.10	3.10	531
]]	11	Left Foot/Boot	78.81	0.18	5.39	306
			Background 1:				
			Background 2:				
			Background 3:				
			Average Background:				

Section 1 - Summary of Results	ry of Results	
Date of Test:	1-Jul-98	
Sult No.	<u>र</u> ु -	
Size:	ٔ د	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	8	
Mean Agent Challenge, mg/m³:	54.89	
Overall PF:	629	
MRED (HD), Body Region:	30451	Scrotum
Systemic MRED (VX), Headache:	6795	
Systemic MRED (VX), Nausea:	16987	
Exposure Dosage, mg-min/m ³ :	1647	
Section 2 - Factors, Calculations and Notes	ulations and I	Votes
Sampler Flow Rate, cm³/min	14.63	
Min GC-Detectable Mass, ng:	6.98	

Below. Background Level

0.016 3454 60.35 34.8065 0.00

Min GC-Detectable Concentration:

Maximum Measureable PF:

Background Level, ng:
'Blank Mass'
Avg Non-MS Peak
BBL

Section 1 - Summary of Results	ary of Results		
Date of Test:	1-Jul-98		
Suit No. Size	9 ×		PSD
Godfer Participant: Confinuration:	Identify Subj. Kappler CPF3		
Duration of Test, min: Mean Acent Challenge mo/m3.	30		
Overall PF: MPED (HD) Rody Berlin:	636 10505	Specific	
Systemic MRED (VX), Headache: Systemic MRED (VX), Nausea: Exposure Dosage, mg-min/m ³ :	6359 15896 1647		

Section 2 - Factors, Calculations and Notes	ulations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3454
Background Level, ng:	60.35
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
188T	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	ssuits	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	15.71	0.04	1.07	1533
~	Ear	41.11	0.09	2.81	286
က	Chin/Neck	7.05	0.05	0.48	3419
4	Upper Back/Nape	38.33	0.09	2.62	629
က	Abdomen	22.35	0.05	1.53	1078
ဖ	Middle Back	13.69	0.03	0.94	1760
7	Armpit (Axillae)	41.91	0.10	2.86	575
œ	Right Arm, Inner	20.62	0.05	1.41	1168
တ	Left Arm, Outer	14.18	0.03	0.97	1699
9	Rt. Forearm, Inner	77.02	0.18	5.26	313
Ξ	Left Hand/Glove	78.26	0.18	5.32	308
12	Lower Back	19.95	0.05	1.36	1208
1 3	Groin	21.40	0.05	1.46	1126
4	Crotch	89.45	0.20	6.11	569
15	Inner Left Thigh	8.51	0.02	0.58	2832
9	Inner Left Shin	24.30	90.0	1.66	385
11	Left Foot/Boot	11.96	0.03	0.82	2015
=	Background 1:	63.07			
	Background 2:	52.70			
	Background 3:	65.29			
	Average Background:	60.35			

PSD No. PSD Location PSD Location MeS, ng MeS, mg/m³ min/m³ min/m³ min/m³ min/m³ MeS, mg/m³ min/m³ min/m³ MeS, mg/m³ min/m³ PSD Location Corrected for Concentration ATOB ATOB <th></th> <th>Section 3 - PSD Data, Calculations and Results</th> <th>Data, Calcu</th> <th>lations and R</th> <th>esults</th> <th></th>		Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and R	esults	
MeS, ng MeS, mg/m³ min/m³ PSD Location Corrected for at PSD Concentration at PSD Mean Local Local Local Local Local Local Amen Local at PSD Scalp 5.08 0.01 0.35 Ear 22.25 0.05 1.52 Chin/Neck 48.37 0.11 3.31 Upper Back/Nape 155.02 0.35 10.60 Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpi (Axillae) 3.44 0.01 0.24 Hight Arm, Inner 11.75 0.03 0.80 Right Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.00 0.13 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.00 0.13 Inner Left Thigh 2.58 0.01 0.01 Inner Left Shin 4.41 0.01 0.01 Background 1: 22.68 0.01 0.19					MeS, mg-	
PSD Location Corrected for at PSD Mean Local Local Local Actions Local Local Local Actions Corrected for at PSD Local Local Actions Local Local Actions Concentration at PSD PSD Scalp 5.08 0.01 0.35 1.52 Chin/Neck 48.37 0.11 3.31 Upper Back/Nape 155.02 0.35 10.60 Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 44.43 0.01 0.24 Hight Arm, Outer 11.75 0.03 1.36 Left Arm, Outer 11.84 0.00 0.13 Crotch 1.984 0.05 1.36 Lower Back 8.30 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 3: <			MeS, ng	MeS, mg/m ³	min/m ₃	
PSD Location Corrected for at PSD Concentration at PSD Dosage at PSD Scalp 5.08 0.01 0.35 Ear 22.25 0.05 1.52 Chin/Neck 48.37 0.11 3.31 Upper Back/Nape 155.02 0.35 10.60 Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.05 1.39 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.01 0.24 Crotch 1.984 0.05 1.36 Left Hand/Glove 1.984 0.05 1.36 Lower Back 8.30 0.01 0.20 Crotch 1.93 0.01 0.18 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.19 Background 1:				Mean Local	Local	
PSD Location Background at PSD PSD Scalp 5.08 0.01 0.35 Ear 22.25 0.05 1.52 Chin/Neck 48.37 0.11 3.31 Upper Back/Nape 155.02 0.35 10.60 Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.05 1.38 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.05 1.36 Lower Back 8:30 0.00 0.13 Crotch 1.93 0.00 0.13 Inner Left Thigh 2:58 0.01 0.18 Inner Left Shin 4.41 0.01 0.18 Inner Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 0.19 5.85 Background 3: 21.24			Corrected for	Concentration	Dosage at	PF at PSD
Scalp 5.08 0.01 0.35 Ear 22.25 0.05 1.52 Chin/Neck 48.37 0.11 3.31 Upper Back/Nape 155.02 0.35 10.60 Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.06 1.70 Rt. Forearm, Inner 44.43 0.01 0.24 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.18 Inner Left Shin 4.41 0.01 0.18 Inner Left Shin 4.41 0.01 0.19 5.85 Background 1:	PSD No.	PSD Location	Background	at PSD	PSD	Location
Ear 22.25 0.05 1.52 Chin/Neck 48.37 0.11 3.31 Upper Back/Nape 155.02 0.35 10.60 Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.05 1.39 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.00 0.13 Inner Left Thigh 2.58 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Shin 4.41 0.01 0.18 Inner Left Shin 4.41 0.01 0.18 Background 1: 22.68 0.01 0.19 5.85 Background 2: 36.30 4.41 0.01 0.50 0.19 <td< td=""><td>-</td><td>Scalp</td><td>5.08</td><td>0.01</td><td>0.35</td><td>4708</td></td<>	-	Scalp	5.08	0.01	0.35	4708
Chin/Neck 48.37 0.11 3.31 Upper Back/Nape 155.02 0.35 10.60 Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.05 1.39 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.00 0.13 Inner Left Thigh 2.58 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 36.30 85.52 Background 3: 21.24 0.19 5.85	8	Ear	22.25	0.05	1.52	1075
Upper Back/Nape 155.02 0.35 10.60 Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.05 1.39 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.02 0.57 Groin 2.95 0.01 0.18 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 0.01 0.30 Background 3: 21.24 0.19 5.85	က	Chin/Neck	48.37	0.11	3.31	464
Abdomen 73.87 0.17 5.05 Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.05 1.39 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Crotch 19.84 0.05 1.36 Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 Background 3: 21.24 Average Background: 26.74	4	Upper Back/Nape	155.02	0.35	10.60	154
Middle Back 24.86 0.06 1.70 Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.05 1.39 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.02 0.57 Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.18 Inner Left Thigh 2.58 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 0.19 5.85 Background 3: 21.24 4 0.09 0.19 5.85	വ	Abdomen	73.87	0.17	5.05	324
Armpit (Axillae) 3.44 0.01 0.24 Right Arm, Inner 20.30 0.05 1.39 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.02 0.57 Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 0.19 5.85 Background 3: 21.24 4 4 Average Background: 26.74 4 5.74	9	Middle Back	24.86	90:0	1.70	396
Right Arm, Inner 20.30 0.05 1.39 Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.02 0.57 Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 85.30 5.85 Background 2: 36.30 36.30 85.85 Average Background: 26.74 26.74	7	Armpit (Axillae)	3.44	0.01	0.24	6952
Left Arm, Outer 11.75 0.03 0.80 Rt. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.02 0.57 Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 21.24 5.85 Average Background 3: 21.24 21.24	80	Right Arm, Inner	20.30	0.05	1.39	1178
Rr. Forearm, Inner 44.43 0.10 3.04 Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.02 0.57 Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 23.30 85.52 0.19 5.85 Average Background 3: 21.24 25.74 25.74 25.74	6	Left Arm, Outer	11.75	0.03	0.80	2035
Left Hand/Glove 19.84 0.05 1.36 Lower Back 8.30 0.02 0.57 Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 Background 3: 21.24 Average Background: 26.74	9	Rt. Forearm, Inner	44.43	0.10	3.04	538
Lower Back 8.30 0.02 0.57 Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.18 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 5.85 Background 2: 36.30 36.30 Background 3: 21.24 Average Background: 26.74	=	Left Hand/Glove	19.84	0.05	1.36	1205
Groin 2.95 0.01 0.20 Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 5.85 Background 2: 36.30 36.30 Average Background 3: 21.24	2	Lower Back	8.30	0.02	0.57	2881
Crotch 1.93 0.00 0.13 Inner Left Thigh 2.58 0.01 0.18 Inner Left Shin 4.41 0.01 0.30 Left Foot/Boot 85.52 0.19 5.85 Background 1: 22.68 Background 2: 36.30 Average Background 3: 21.24	13	Groin	2.95	0.01	0.20	8107
Inner Left Thigh	*	Crotch	1.93	0.00	0.13	12391
Inner Left Shin	5	Inner Left Thigh	2.58	0.01	0.18	9269
Left Foot/Boot 85.52 0.19 5.85 5.85	16	Inner Left Shin	4.41	0.01	0:30	5423
_	11	Left Foot/Boot	85.52	0.19	5.85	280
		Background 1:	22.68			
1		Background 2:	36.30			
		Background 3:	21.24			
		Average Background:	26.74			

Section 1 - Summary of Results	nary of Results	
Date of Test:	7-Jul-98	
Suit No.	1	
Size:	Σ	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	8	
Mean Agent Challenge, mg/m3:	54.49	
Overall PF:	1919	
MRED (HD), Body Region:	63781	Chin & Neck
Systemic MRED (VX), Headache:	19193	
Systemic MRED (VX), Nausea:	47983	
Exposure Dosage, mg-min/m3:	1635	

Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3428
Background Level, ng:	26.74
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

Section 1 - Summary of Results	any of Results	
Date of Test:	7-Jul-98	
Suit No.	18	
Size:	XXL	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	99	
Mean Agent Challenge, mg/m³:	54.49	
Overall PF:	165	
MRED (HD), Body Region:	16890	Chin & Neck
Systemic MRED (VX), Headache:	1646	
Systemic MRED (VX), Nausea:	4116	
Exposure Dosage, mg-min/m ³ :	1635	

Section 2 - ractors, Car	Section 2 - Factors, Calculations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3428
Background Level, ng:	26.74
Blank Mass	34.8065
Avg Non-MS Peak	0.00
188	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	sults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	1.12	0.00	0.08	21353
8	Ear	182.66	0.42	12.49	131
ဇ	Chin/Neck	182.66	0.42	12.49	131
4	Upper Back/Nape	315.86	0.72	21.59	9/
2	Abdomen	405.47	0.92	27.71	29
9	Middle Back	409.26	0.93	27.97	28
7	Ampit (Axillae)	304.92	0.69	20.84	78
∞	Right Arm, Inner	96.14	0.22	6.57	249
6	Left Arm, Outer	158.43	0.36	10.83	151
9	Rt. Forearm, Inner	418.03	0.95	28.57	22
=	Left Hand/Glove	190.62	0.43	13.03	125
12	Lower Back	220.09	0.50	15.04	109
5	Groin	153.74	0.35	10.51	156
14	Crotch	44.70	0.10	3.06	535
15	Inner Left Thigh	5.70	0.01	0.39	4196
16	Inner Left Shin	22.22	0.02	1.52	1076
11	Left Foot/Boot	168.47	0.38	11.52	142
	Background 1:	22.68			
	Background 2:	36.30			
	Background 3:	21.24			
	Average Background:	26.74			

Section 1 - Summary of Results	ary of Results			Sect
Date of Test:	7-Jul-98			
Suit No.	19		PSD No.	PSD L
Size:			-	Scalp
Test Participant:	Identify Subj.		2	Ear
Configuration:	Kappler CPF3	- 11 - 1	က	Chin/Neck
Duration of Test, min:	30		4	Upper Bac
Mean Agent Challenge, mg/m3:	53.22		5	Abdomen
Overall PF:	293		9	Middle Bad
MRED (HD), Body Region:	8545 Scrotum	••••	7	Ampit (Ax
Systemic MRED (VX), Headache:	2933		&	Right Arm,
Systemic MRED (VX), Nausea:	7334		6	Left Arm, (
Exposure Dosage, mg-min/m ³ :	1597		10	Rt. Forean
			•	:

Section 2 - Factors, Calculations and Notes	dialions and notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3348
Background Level, ng:	26.74
Blank Mass	34.8065
Avg Non-MS Peak	0.00
188F	Below Background Level

	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	sults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	17.95	0.04	1.23	1301
7	Ear	28.76	0.07	1.97	812
က	Chin/Neck	212.74	0.48	14.54	110
4	Upper Back/Nape	43.75	0.10	2.99	534
ည	Abdomen	82.60	0.19	5.65	283
9	Middle Back	81.16	0.18	5.55	288
7	Ampit (Axillae)	53.05	0.12	3.63	440
80	Right Arm, Inner	36.29	90:0	2.48	644
6	Left Arm, Outer	63.82	0.15	4.36	366
10	Rt. Forearm, Inner	139.09	0.32	9.51	168
=	Left Hand/Glove	102.27	0.23	6.99	228
12	Lower Back	16.40	0.04	1.12	1424
13	Groin	71.15	0.16	4.86	328
14	Crotch	106.61	0.24	7.29	219
15	Inner Left Thigh	21.75	0.05	1.49	1074
16	Inner Left Shin	132.81	0.30	9.08	176
17	Left Foot/Boot	23.23	0.05	1.59	1006
	Background 1:	22.68			
	Background 2:	36.30			
	Background 3:	21.24			
	Average Background:	26.74			

Section 1 - Summary of Results	ary of Results	
Date of Test:	7-Jul-98	
Suit No.	20	
Size:		
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	30	
Mean Agent Challenge, mg/m3:	53.22	
Overall PF:	692	
MRED (HD), Body Region:	17175	Scrotum
Systemic MRED (VX), Headache:	6922	•
Systemic MRED (VX), Nausea:	17306	
Exposure Dosage, mg-min/m ³ :	1597	

Section 2 - Factors, Calculations and Notes	sulations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3348
Background Level, ng:	26.74
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
188	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcul	lations and Re	sults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³		
			Mean Local		
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	4.94	0.01	0.34	4728
8	Ear	11.87	0.03	0.81	1968
က	Chin/Neck	102.27	0.23	6.9	228
4	Upper Back/Nape	96.9	0.02	0.48	3356
ຸເດ	Abdomen	28.87	0.07	1.97	809
9	Middle Back	29.00	0.07	1.98	802
	Ampit (Axillae)	24.22	90:0	1.66	964
œ	Right Arm, Inner	25.96	90.0	1.77	006
6	Left Arm, Outer	22.24	0.05	1.52	1050
9	Rt. Forearm, Inner	47.86	0.11	3.27	488
=	Left Hand/Glove	46.44	0.11	3.17	503
12	Lower Back	6.05	0.01	0.41	3861
65	Groin	53.34	0.12	3.65	438
4	Crotch	53.04	0.12	3.63	440
15	Inner Left Thigh	12.98	0.03	0.89	1800
16	Inner Left Shin	1.83	0:00	0.13	12764
11	Left Foot/Boot	119.36	0.27	8.16	196
	Background 1:	: 22.68			
	Background 2:	36.30			
	Background 3:	3: 21.24			
	Average Background:	J: 26.74			
			1		

		and impe	Section 3 - FOD Data, Calculations and nesdits	21100	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m³	
			Mean Local	Local	100
PSD No.	PSD Location	Corrected for Background	Concentration at PSD	Dosage at PSD	Pr at PSU Location
-	Scalp	14.01	0.03	0.96	1690
~	Ear	14.60	0.03	1.00	1622
က	Chin/Neck	7.22	0.02	0.49	3280
4	Upper Back/Nape	6.45	0.01	0.44	3671
ഹ	Abdomen	16.38	0.04	1.12	1446
ဖ	Middle Back	9.12	0.02	0.62	2596
7	Armpit (Axillae)	13.23	0.03	0.90	1790
&	Right Arm, Inner	14.41	0.03	0.98	1643
6	Left Arm, Outer	20.97	0.05	1.43	1129
9	Rt. Forearm, Inner	142.52	0.32	9.74	166
=	Left Hand/Glove	42.15	0.10	2.88	295
12	Lower Back	6.31	0.01	0.43	3753
5	Groin	7.69	0.02	0.53	3079
4	Crotch	28.39	90.0	1.94	834
1	Inner Left Thigh	19.66	0.04	1.34	1204
9	Inner Left Shin	31.82	0.07	2.17	744
4	Left Foot/Boot	33.90	0.08	2.32	669
	Background 1:	17.70			
	Background 2:	18.89			
	Background 3:	19.48			
	Average Background:	18.69			

Section 1 - Summary of Results	ary of Results	
Date of Test:	9-lul-98	
Suit No.	21	
Size:	궃	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	30	
Mean Agent Challenge, mg/m3:	53.95	
Overall PF:	1055	
MRED (HD), Body Region:	32529	Scrotum
Systemic MRED (VX), Headache:	10548	
Systemic MRED (VX), Nausea:	26371	
Exposure Dosage, mg-min/m³:	1619	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3394
Background Level, ng:	18.69-
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
8BL	Below Background Level

Section 1 - Summary of Results	ary of Results		
Date of Test:	9-Jul-98		
Suit No.	22		
Size:	ᅻ		
Test Participant:	Identify Subj.		
Configuration:	Kappler CPF3		
Duration of Test, min:	8		
Mean Agent Challenge, mg/m³:	53.95		
Overall PF:	928		
MRED (HD), Body Region:	84569	Chin & Neck	
Systemic MRED (VX), Headache:	9277		
Systemic MRED (VX), Nausea:	23192		
Exposure Dosage, mg-min/m ³ :	1619		

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3394
Background Level, ng:	18.69
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	sults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	
		Corrected for	Concentration	Dosage at	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	5.76	0.01	0.19	8579
8	Ear	38.25	0.09	2.61	619
က	Chin/Neck	36.12	0.08	2.47	929
4	Upper Back/Nape	56.23	0.13	3.84	421
ĸ	Abdomen	33.92	0.08	2.32	869
9	Middle Back	5.69	0.01	0.39	4162
7	Armpit (Axillae)	24.48	90.0	1.67	296
80	Right Arm, Inner	18.70	0.04	1.28	1266
6	Left Arm, Outer	23.81	0.02	1.63	995
9	Rt. Forearm, Inner	42.39	0.10	2.90	226
F	Left Hand/Glove	18.77	0.04	1.28	1262
12	Lower Back	30.85	. 0.07	2.11	208
13	Groin	67.25	0.15	4.60	352
4	Crotch	0.00	BBL	B BL	3394
15	Inner Left Thigh	43.63	0.10	2.98	543
16	Inner Left Shin	50.25	0.11	3.43	471
11	Left Foot/Boot	11.86	0.03	0.81	1997
	Background 1:	17.70			
	Background 2:	18.89			
	Background 3:	19.48	-		
	Average Background:	18.69			

Section 1 - Summary of Results	ary of Results	
Date of Test:	86-Jnr-6	
Suit No.	23	
Size:	귖	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	8	
Mean Agent Challenge, mg/m3:	52.77	
Overall PF:	484	
MRED (HD), Body Region:	10935	Scrotum
Systemic MRED (VX), Headache:	4839	
Systemic MRED (VX), Nausea:	12098	
Exposure Dosage, mg-min/m ³ :	1583	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3320
Background Level, ng:	18.69
"Blank Mass"	34.8065
Avg Non-MS Peak	0.00
BBL	Below Background Level

	Section 3 - PSD Data, Calculations and Results) Data, Calcu	lations and Re	sults	
				MeS, mg-	
		MeS, ng	MeS, mg/m ³	min/m3	
			Mean Local	Local	
4		Corrected for	Concentration	Dosage at	PF at PSD
PSU No.	PSD Location	Dackground	al rou	2	Locallon
-	Scalp	19.61	0.0 4	<u>ਦ</u> ਲ	1181
7	Ear	43.93	0.10	3.00	527
ო	Chin/Neck	37.81	0.09	2.58	613
4	Upper Back/Nape	19.84	0.05	1.36	1167
വ	Abdomen	24.59	90.0	1.68	942
9	Middle Back	14.36	0.03	96.0	1613
7	Ampit (Axillae)	291.12	99.0	19.90	80
ω	Right Arm, Inner	24.82	90.0	1.70	933
6	Left Arm, Outer	11.70	0.03	0.80	1979
9	Rt. Forearm, Inner	126.62	0.29	8.65	183
F	Left Hand/Glove	60.91	0.14	4.16	380
12	Lower Back	12.63	0.03	98.0	1834
13	Groin	82.54	0.19	5.64	281
14	Crotch	82.60	0.19	5.65	280
15	Inner Left Thigh	26.22	90:0	1.79	883
16	Inner Left Shin	8.57	0.02	0.59	2702
17	Left Foot/Boot	24.08	0.05	1.65	962
	Background 1:	17.70			
	Background 2:	18.89			
	Background 3:	19.48			
	Average Background:	18.69			

Section 1 - Summary of Results	ary of Results	
Date of Test:	9-Jul-98	
Suit No.	54	
Size:	×	
Test Participant:	Identify Subj.	
Configuration:	Kappler CPF3	
Duration of Test, min:	8	
Mean Agent Challenge, mg/m3:	52.77	٠
Overall PF:	1534	
MRED (HD), Body Region:	29355	Scrotum
Systemic MRED (VX), Headache:	15336	
Systemic MRED (VX), Nausea:	38340	
Exposure Dosage, mg-min/m ³ :	1583	

Section 2 - Factors, Calculations and Notes	culations and Notes
Sampler Flow Rate, cm³/min	14.63
Min GC-Detectable Mass, ng:	6.98
Min GC-Detectable Concentration:	0.016
Maximum Measureable PF:	3320
Background Level, ng:	18.69
'Blank Mass'	34.8065
Avg Non-MS Peak	0.00
88L	Below Background Level

	Section 3 - PSD Data, Calculations and Results	Data, Calcu	lations and Re	saults	
	-			MeS, mg-	
		MeS, ng	MeS, mg/m ³		
			Mean Local	<u> </u>	
		Corrected for	Concentration	8	PF at PSD
PSD No.	PSD Location	Background	at PSD	PSD	Location
-	Scalp	14.72	0.03	1.01	1573
8	Ear	0.00	BBF	BB L	3320
က	Chin/Neck	7.11	0.05	0.49	3257
4	Upper Back/Nape	16.25	0.04	1.1	1425
2	Abdomen	0.77	0.00	0.05	30078
9	Middle Back	5.17	0.01	0.35	4480
7	Armpit (Axillae)	28.13	90.0	1.92	823
•	Right Arm, Inner	8.51	0.02	0.58	2722
တ	Left Arm, Outer	9.27	0.02	0.63	2498
유	Rt. Forearm, Inner	8.25	0.02	0.56	2807
=	Left Hand/Glove	16.29	0.04	1.	1422
12	Lower Back	0.00	BB L	BB L	3320
13	Groin	149.04	0.34	10.19	155
14	Crotch	30.77	0.07	2.10	753
5	Inner Left Thigh	20.93	0.05	1.43	1107
9	Inner Left Shin	3.86	0.01	0.26	0009
17	Left Foot/Boot	13.59	0.03	0.93	1704
	Background 1:	17.70			
	Background 2:	18.89			
	Background 3:	19.48			
	Average Background:	18.69			